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THE
DENTAL OBTURATOR:

DEVOTED TO THE

Science and Art of Dentistry.

PUBLISHED QUARTERLY.

EDITED BY

JOHN S. CLARK, D. D. S.

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VOLUME I.  
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NEW ORLEANS:

1856.

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ERRATA:

- On page 99, 12th line from top, for "relicts," read "relics."
- On page 99, 3d line from bottom, for "demonstrated," read "denominated."
- On page 102, 7th line from bottom, for "more," read "none."
- On page 105, 3d line from bottom, for "acquirement if it were," read "acquirement. If it were," &c.

THE DENTAL OBTURATOR.

VOL. I.]

MAY, 1855.

[NO. I.

INTRODUCTORY.

A desire not to teach, but to induce—not to create, but to warm into more active practical life, principles, and desires, that actuate all who, in adopting the Profession of Dentistry, have pledged themselves, time, talents and strength—promising to “love, cherish and protect” her best interests, has induced us to send forth this first number of the

DENTAL OBTURATOR.

Neither do we desire to dictate, or act the censor, but to “talk by the way,” and, if possible to cheer the colaborer in his efforts to excel, and in his hours of relaxation from daily toil to drop a word that may touch the chord of union between him and his high vocation.

A mote floating in the sunbeam will sometimes arrest the eye and inspire to higher thoughts. So a thought, though insignificant in itself, may flit across the intellectual vision and lead the way to fields of investigation, rich in mines of truth and science.

We do not desire to be egotistical, but desire to give practical facts, though home-gathered rather than word-pages of theory, and court more the excellence of the operator than the writer.

Neither is the OBTURATOR, the offspring of speculation; for in our opinion the practice of this “specialty of the healing art” calls no man into the busy mart of trade. The pedlar of dental devices, secrets, or sentiments holds no seat in her “Temple.”

The OBTURATOR is not the offspring of sinecuan reveries, brought forth by hours of idleness. Such is not our idea of the duties of our calling, and such ought not its fruits to be. Our profession is made up of practical dealings with stern realities; and leaving motives of trade to the speculator, we answer to the call of suffering humanity to lay aside all considerations to the patient and careful investigation of the science and faithful practice of the art.

In this as in all other professions (honorable) we rest as securely on principles whose foundations are as immutable as truth, as practical as charity. And in our daily labor of alleviation our duties are as sacred as his who stands by the portal of death, touching with skillful hand the trembling chords of human life; or of the “heaven-appointed

messenger," who ministers to the home-bound spirit as it enters "the valley of the shadow of death."

Shall the Surgeon in tying the severed artery enclose in the same ligature the tendon and nerve from want of knowledge or patience to separate them?

Shall the Oculist, dealing with those delicate tissues on which are reflected the fading pictures of smiling faces and a happy home, pluck the last lubricating drop from those night-doomed orbs by a careless or uneducated hand, and pass, conscience-acquitted and light-hearted, to happiness?

Shall the Dentist then, dealing with tissues as delicate (and may we not say with organs as important) be less careful in investigation or particular in operating than common humanity demands of the former? There is no temporising ground. He either does his duty, or he does not. He either is fit to discharge it, or he is not. If he knows his duty he ought to do it "without variation or shadow of turning." If he does not know he has no right to undertake it. We have said that we do not desire to act as censor, but that is not intended to mean that we are to look with complacency upon what is considered the shame of (what the world understands as) Dentistry.

Time was when certain nameless men, catching a few sparkling gems from the arcana of the sciences, traversed the "hills and dells" of the Old World, the pretended magi of science. Science heeded not their plunder. She closed not her book; was not demeaned by their acts; but bearing aloft her steady light, rising higher and higher till the world hailed her in her zenith of glory.

Time was, too, when mystery shrouded the infancy of our science and art; when *the secret* of Dentistry was thought to be the only thing needful to a golden harvest of gilded patients. *The secret*, from being sold "by the yard," soon became (*very*) common property, till home-judged prodigies of genius brazed the incongruous mass, painted a flaming sign and the barber from pure shame sued for a divorce.

Years rolled on. For years did the "noble men and true" toil in sowing the seeds for a glorious harvest of honor to their "noble profession." For years did the brazen artizan sow the "tares" of unhallowed speculation, until speculative Dentistry could send to a world's convention a majority of delegates.

But may we not say with confidence that a brighter day has dawned? Thanks to the men who have demonstrated its truths and developed the science.

Much has been said and written about elevating the profession. The only question is, what has been done and what means have been used

that have been productive of good? An improved manner of performing operations, with a more perfect understanding and development of the science, obtained through the improved literature of the profession, compiled from individual experience, and investigation we suppose have been the chief agents.

But there lies beneath all this a cause from which these are but fruits. That cause is the higher appreciation of the duties of the profession and the consequent dissemination of a better and purer system of professional ethics.

The efforts of true geniuses are generally commensurate with his ideas of the importance of the subject claiming his attention. There may be geniuses of such a stamp as to know and feel no difference between the construction of a penny whistle or a dental device on which are staked the hopes, health and happiness of a sentient being; and it may account for the penny whistle crop of *things*, miscalled samples of dentistry, that flood the land; but suffering humanity has spoken, and our profession has responded to the call and developed means of relief, in some measure equal to the importance of the demand.

Elevation means the elevating ourselves to the standard demanded by a demonstrated science. Whenever our profession, individually or collectively, feel the true nature of their calling and respond to its high code of moral ethics, there will not be wanting the means of increased perfection in their works at once elevating and ennobling.

In our efforts of elevation we are not called upon on account of false impressions caused by the mushroom crop of professional misnomers to defend the temple of our science from popular mistakes as to character.

Whoever of us falls short of the requirements she imposes in word, or act, merely sinks below the pale of her courts himself, but does not draw after him into degradation the noble structure. Science was never sullied by the acts of pretended votaries. As one person cannot actually disgrace another, so mere pretension cannot impute to a pure profession the responsibility of impure acts.

Such, in our opinion, are the principles that ought to actuate us all, and on which we ought to take our stand against a world of obstacles to their adoption. But when we look over the length and breadth of the land, the plain practical fact stands out in noon-day light, that such are not the whole-hearted, undeviating principles that warm all the hearts and guide all the hands that are daily ministering to the wants of the suffering. And it will not do for us to fold our arms and say, "we have nothing to do with them," "they are not of us;" neither will it do to cover up the fact, by saying it is a delicate point. We do

meet it every day, and we must meet it. We are all *imperfect*, erring students of science, and may we not hope that there are more errors of head than heart? Charity induces the belief. As men, as philanthropists, we have duties to them and to their patients.

This is an age of improvement. Some may be induced to change for the better. Recrimination and even truthful epithets of reproach will not stop men who, pretending, do not possess the proper qualifications from practicing as Dentists. It may drive them to lower depths of degrading practice, but to stop them, never. A principle bearing the impress of truth may stimulate them to the adoption of the idea of improvement. A kind word may induce a point of higher excellence in their practice; and is not he who accomplishes this doing the profession and the world a service?

Our aim should be to do them good and make them better. How is the world made better? Did retributive justice, in the shape of the gallows or the prison, ever improve the morals of the community? Are men induced to the performance of good acts by them? They may protect us from villainous contact, and occasionally reclaim the isolated wanderer from the paths of vice, but they never send abroad a healing virtue. THE LIVES OF THE GOOD ARE THE RENOVATORS OF SOCIETY. To the touch of charity human nature softens, and in that plastic state receives the impress. Men may live in an imperfect world—may wield a powerful influence there—but while they condemn wrong doing not constitute themselves private police to catch the offenders.

One word in regard to individual efforts by way of “popular essays for the eye of the million.” We consider it in bad taste; wrong in point of remedy; and injurious not only to the profession but to the patients themselves to attempt instructions to the world at large by such appeals, no matter how well written. WORKS not WORDS are wanted.

As well might the physician issue instructions to the community in which he practices to enable them to make a proper diagnosis in case of disease. He might say, how unfortunate that these people suffer from ignorance on that subject. True, they do suffer from their thousand mistakes.

But the physician well knows that in attempting it he but increases the evil, for the vendor of the vilest nostrum will publish ten lines to his one, and the mass will believe him the soonest. The physician can only state the simple facts known to his profession, and lay claims to probable success. But the nostrum vendor can give them things in a more alluring shape. He can tell them exactly where the medicine will travel through all the ramifications of the system. He can follow it

with his superhuman ken as it gets behind all the bad ("*pecant humors*") of the system, forcing them out. He can give any one a perfect diagnosis in all the ills flesh is heir to, by a single dash of the pen. And the people cry amen! For "don't they know he is right" Hav'nt they "felt just what he describes?" So it is, truth—simple truth—is too scant in its proportions; it needs inflation to be popular. So it would be in similar attempt in our specialty. The remedy lies not there.

Let our works but show that we *do arrest* disease, and that our patients *are really benefited*, and the evil is reached, the remedy is inevitable.

Never can our profession assume the high position it merits, until dentists prove themselves worthy of the trust and *patients* cease to be *amateur Dentists*.

A word to and of the profession South. While the ever enterprising portions of the North and West have their colleges, their societies, and their periodicals, to strengthen and combine their efforts, we of the South have no means of communication, except through those channels.

The Obturator is offered to the profession as an attempt to (*Obturare*) place in that territorial vacancy the means of *closing* in some measure the *portal* to error, and if possible of *shutting out* malpractice from the land of the most willing people on earth to remunerate for really good operations. Dentistry ought to be absolved from sinister considerations everywhere; but there are points that offer facilities, and also points that are prolific in hindrances to successful demonstration. One of those points offering facilities is the South, and much ought to be expected of the southern practitioner.

In the South there is a tendency, too, among patients to be governed by principles, that the true Southron feels himself—that of personal honor. He takes the chair of the Dentist, trusting to similar promptings in the operator. There is no excuse, under any circumstances, for a Dentist to be derelict in his duties; but we put the question to men of motive and ask, if such patients do not call up every noble feeling of our nature to meet that confidence by our best efforts?

We confess to the weakness that if we consented to operate for dental "shoppers," whose only thought was to see how much could be made by cheap contracts, (and who of course are suspicious patients,) we should *feel* different in the performance of simple duties.

Again: the Southron wauts no galvanized, soft solder plastering in his mouth, and is not only willing but anxious to pay for the best operations. We have, then, beyond the non performance of duties, inducements presented to the noblest feelings of our natures, and he must be neither man or gentleman who can prove recreant to them.

The foregoing being suggestive of a few points professional, we offer in connection a few short articles, embracing some points illustrative of principles that will govern us in the future issues of this journal; and while we disclaim all intentions of speaking by authority, as though we were *the profession*, it is expected that so far as principles are stated they will bear the scrutiny of comparison with the tacit laws of the science and its practice.

ON FILLING TEETH.

BY JOHN S. CLARK, D. D. S., NEW ORLEANS.

Filling teeth is admitted to be one of the most important and principal operations of the Dentist; and it is proposed in this and succeeding numbers of the OBTURATOR to offer a series of articles on that operation. A filling may be solid: it may be put in mechanically too well to come out soon: it may be smooth and still, in either case, be a *bad filling*. But all these points must be accomplished, or a good filling cannot be produced, therefore

We propose, first, to examine the mechanical principle on which we rely in forming a *solid* and united mass of gold into a filling. By taking a couple of leaden bullets and cutting a perfectly flat or plane on one side of each and then by placing those planes in contact (*if unsoiled*) with each other, and presenting an even, slightly rotating pressure, a union takes place between them so that the full force of the same fingers that united them will not be able to separate them by straight, separating force. This experiment is well known and so familiar to most persons that we need not stop to inquire except as to one fact, viz: what causes them to cohere? It will be explanation enough to say the perfect exclusion of air from the planes and the tendency in soft metals to cohere when *clean* surfaces are thus placed in contact. *Pure gold*, being a soft metal, is governed by the same laws and in the shape of foil (which is but thin plates of pure gold) can be made to assume the same state of cohesion.

Is it then too much to assert that the filling which comes the nearest to this cohesion is, of necessity, the most solid?

It is taken for granted, that to obtain the most perfectly solid filling is to gain (at least) one important point in filling teeth—a point, on which rests others equally important, of which we shall hereafter speak.

In examining the different modes of introducing foil, we wish to be fully understood that so far as concerns the one point of solidity, it is

of no consequence how the foil is introduced, provided it, in the end, attains to that of perfect cohesion.

Let us examine, then, in the light of the experiment quoted, the means of bringing foil to fulfil the conditions necessary to cohesion.

Take, say a sheet of foil, cut it (*without soiling*) into sheets, say three-eighths of an inch square, and lay them carefully together. Now, one condition is nearly fulfilled, that of planes in contact. Now, force out the air between them by pressure and you fulfil the other. The result will be found to be cohesion. Now, take again a sheet of foil, crush it together (*unsoiled*) into the same size, as near as possible, and apply the same pressure, and you have, to say the least, a very different degree of cohesion. Carry the experiment farther; roll both out into thin plate in the mill and examine them, and great difference will be found to exist. To any one interested in this examination, this experiment will prove an interesting one, and will amply repay its performance and probably satisfy any one that the nearer we approximate to these conditions, placing the gold in the cavity of the tooth in plane surfaces against each other, the nearer we can approximate to a perfect cohesion of the metal. We expect to describe how this can be done with the least lateral pressure, even to the building up of artificial crowns or cusps, but first design to examine the principles involved in the different modes of manipulating in the operation of filling teeth.

Dr. Watts, in an article on crystal gold in the "American Journal of Dental Science," for January, says: "The most successful operations with foil succeed best when they prepare their gold in the form of pellets, which are constructed by breaking up the smooth surface of the foil into as many angles as possible, and shaping it into balls or pellets of different sizes. These are introduced, one by one, into the cavity of the tooth when they readily take hold upon those which have preceded them when they are gradually worked into their texture."

We apprehend that Dr. Watts is mistaken in two points. First, the most successful fillings with foil are not put in in that manner; and secondly, good fillings are not secured by the same principle by which is formed the woolen fabrics called felt, that is, by the interlocking of the fibre, neither by welding.

The cohesion of soft metals does not take place on either of these principles, and when really good fillings are put in of foil they do not depend for retention or solidity on the "spider-leg" shape of gold, or cavity, or on welding. The perfection lies in the perfect manner in which the planes are brought in contact, and the right force is applied to drive out the air and condense the grain.

Dr. Watts has better arguments in favor of his preparation of gold.

We shall take this view of the principles of cohesion, and proceed to inquire if gold, in the shape of pellets or rolls made without regard to regularity of lamina, does not require more force to bring planes in contact than proposed in the foregoing experiment with a leaf of foil. If there exist any doubt, I propose another, viz: Make your pellets by folding small square pieces of foil carefully (*unsoiled*) into small blocks, pack them into a carious tooth and see which will form a cohesive mass the soonest and with the least force, the blocks or the pellets. What is commonly called the spiral roll presents the same difficulty. The broken surface of the foil and the innumerable angles and cavities wanting contact, require more force to bring them into obedience to the laws of cohesion. The principal advantages to be found in using foil in that crushed, irregular shape are, that it offers great facility in retaining the mass in the cavity while packing.

But in just as much as its thousand angles and arches lack of *plane* or surface contact, does that mode of using foil fall short of the condition best adapted to produce the proper result, that of cohesion. Force then is necessary to crush those angles into even a near approximation to planes which foil introduced in regular lamina possesses at the outset. The experiment proposed with block pellets (Dr. James Taylor's method of filling—See Dental Register, vol. 4, No. 1, page 16.) will show this point clearly.

We do not expect to revolutionize the whole manipulation in filling teeth. We do not expect that the whole profession are going to throw down their instruments, send away their patients and pay us the compliment of exclusive attention; but we do expect that there are many in the profession who are anxious enough to cull from all sources means of accomplishing the important operation of putting in a good filling according to the (always *utilitarian*) principles of science; and before proceeding, we will say that all such we urge earnestly not to take our "ipse dixit" in the foregoing experiments, but to try them faithfully and minutely, and in doing so, to observe closely every point laid down as the basis of such experiment, and here we would recapitulate in the presentation of one point, and that is the unsoiling of surfaces. There are two means of accomplishing it. One is folding the gold without contact with the fingers, or unclean surfaces; and the other is by annealing after forming, for that cleans as well as anneals.

We think the foregoing experiments prove the truth of the principle of cohesion as the means in our hands of forming a solid filling, and will now propose the method of using that principle in introducing foil into a carious tooth. In the sixth volume of the "DENTAL REGISTER," No. 2, an article appears under our signature, embracing the description of our manner of introducing gold, and we quote:

DR. JAMES TAYLOR: *Dear Sir*—In your April number (1853) of the "DENTAL REGISTER," you were pleased to notice favorably some operations of mine; also to express a wish for some account of my mode of operating. I need not say I felt flattered by so kind a notice, coming, as it did, from one of the pioneers in our "noble profession." But I will say that I hold all I have, as an operator in Dental Surgery, as not belonging more to me than to the profession, and it will give me sincere pleasure to comply with your request, if I may add to or stimulate the endeavor of any of my co-laborers to attain a single point more of excellence or facility in their operations.

"In filling I use my gold in cylinders, entirely, which are set up parallel to the walls of the cavity (*from bottom to top or orifice*) until the cavity is apparently full. A round pointed instrument is then forced down between them and others inserted, (*in the opening*), decreasing in size (of instrument and cylinder) until it is LITERALLY FULL. These cylinders are made thus:

I take the small pivot broach, (watchmaker's,) and break it off, say one-eighth of an inch from the shoulder. This part of the blade is then reduced to a perfect point, preserving the broach's cutting edge as perfectly as possible. I then fold the gold in strips as wide as I wish my cylinders long, (according to depth of cavity to be filled.) To catch the end of a strip on this broach point between the thumb and forefinger of the left hand, and to rotate the broach with the right will be obviously easy for any one to produce a perfectly even and smooth cylinder of any desired size. The manner of introducing these is with tweezers or "TAYLOR'S FILLING FORCEPS."

These cylinders are made of different density. The first and those placed against the walls of the cavity are rolled lighter than those introduced last, which are rolled quite hard. Some are made of a slightly conical shape, (by folding the strip thicker on one edge than the other,) and introduced according to shape of cavity with the base of the cone, in or out, as the case may require. * * *

We quote this for several reasons, among which are that we may show that we are not propounding theories, but are thankful for the discovery which we made of this method several years since, for dating back to that period our operations show a decided improvement, and it is essentially our mode now. There are some operators, too, that have adopted it in full, and our assertion is concurrent with numerous Dentists of high standing that the beauty and perfection of their fillings have not been excelled by any one.

Five years of pretty full practice has increased confidence, also by results not as compared to former operations, but as compared with

conceptions of the fullest utility demanded of a filling. In the foregoing we have only attempted one position, that of obtaining, according to a well known principle, a solid filling. As we said at the outset, that is but one point. The continuation of this article will embrace a more full description of manipulation in the use of cylinders; also an examination of other points highly important to the production of a good filling, among which are: *The adaptation to frail teeth, or the low amount of pressure required in consolidation. The ductility of the metal after cohesion as compared with other methods, &c.*

(To be continued.)

SPECULATIVE DENTISTRY.

By Speculative Dentistry we mean the performing of operations according to the dictates of interest or convenience, thereby doing less than the best that the profession can give.

We suppose this to be *wrong* under *all circumstances*. A Dentist has a *right* to *do right*, but no *right* to *do wrong*; and we hold it wrong to let motives of interest or convenience induce us to be unfaithful in the least particular. It is useless to attempt to throw the blame on the patient by saying that he desired it. Has a surgeon a right to touch lightly the slumbering fires of human dissolution and extirpate only a part of the gnawing gangrene in an offending member *to order*? Has the physician a right to treat disease by non-effective agents or impure medicines *to order*? How, then, can the Dentist, to abridge time, save labor, economize stock, or please patients, stop short of the highest degree of perfection in the eradication of disease that his head can design or his hand execute?

Again: in the sharp, trading world, a man may not issue insurance policies on false security, for the law holds him criminal. How much more culpable would he be did he know that the house of the insured would certainly burn down while he held that false policy. Our policies of health to the teeth at best are faulty, and no representations should be made to induce the belief that we insure. But a patient applies to a Dentist for the purpose of saving those organs, and in spite of all representations comforting procrastination enters a sanguine belief in dental surety; and the fact is well known that the loss of money in imperfect operations bears no comparison to the loss occasioned by false confidence in those operations, causing, as it does, the discovery to be made, when it is too late, and a worse than fire crumbles the walls of his palace of jewels.

The law also punishes a man for obtaining money under "false pretences." What act can there be more closely allied to this crime than covering from the eye rather than thoroughly extirpating disease; or if extirpating, failing to perfectly secure the exposed part by the best means known in our art while we profess that faithfulness?

The law punishes a man for maiming (mayhem.) Who destroys important organs of the body if not he who destroys teeth? Does not he destroy teeth who fastens up within the tooth incipient decay? Does he not destroy teeth who, by an impure metal, adds to causes of decomposition? Does he not destroy teeth who forms ragged, porous lines for deposit against unprotected walls of teeth, denuded of enamel, by disease, or its surface exterminator the file? We do not look upon these things as trifles, as mere variations allowable as degrees of perfection that exist in trade and traffic, like shilling calico in comparison with finer fabrics.

This very trade or traffic is what we mean by "Speculative Dentistry;" and we unblushingly hesitate not to place it among the crimes, and not mere imperfections mechanical.

ANSWER TO H. L. P.

H. L. P. wishes to study Dentistry. He is a graduate of ——— college, and a young man of rare abilities, and he writes, asking permission to spend a year or two in my office, and his father promises to pay any fee I may ask.

NEW ORLEANS, ——— 1855.

Dear Sir: Yours of the 21st was duly received. * * * * * In reply, permit me to premise by saying that you must not impute any thing that I may say to a desire to hinder or dissuade you from entering our profession, or to any wish to retard accession to our ranks; and I will say here that more good operators are needed, for it is my opinion that if all the operations actually performed or attempted in any large city you may name were done as they ought to be, twice the number of Dentists could not perform them.

Good operations benefit us all. They demonstrate their utility, they establish confidence, and consequently would increase the number of operators needed.

I came into the profession by a long, "*up hill road*"—by days of weariness in the wrong road—by days of toil and mortification, to find the way. In good faith I made promises of results to patients that in

good faith I had to take back and say I was mistaken, and I came to the conclusion that I never would become a party to inducements to any young man's traveling that road; and especially has that resolve strengthened as facilities have been so amply supplied by legitimate teachers in our dental colleges.

Permit me to digress a little and offer a few suggestions as to what Dentistry is.

Dentistry is a science and an art, and should form, in practice, a "learned profession." As a science it calls for *long*, patient, mental labor. The life of a scholar, who collects, analyzes, and forms into its circle facts and principles from all other kindred sciences, and who, after life-long investigation, will acknowledge himself a student still. The Goddess of Science holds open Court to all who wish to learn her mysteries; but no filibustering expedition into her territories; no taking by storm or violence from her stores will avail; no writ of mandamus will bring her into Court, and compel her to give up her secrets. Even the smell of "the midnight oil" may not avail. She is wont to be wooed by the humble, patient student.

Dentistry is an art. The practice of an art pre-supposes a knowledge of the *subject* handled; also the education of the eye and the hand.

In most arts the thing to be accomplished requires only a repetition of a thing once artistically accomplished. Not so in Artistic Dentistry. In its demands it is "changing ever;" and I hesitate not to say that he who is not in himself a perfect fund of expedient cannot be a dentist even in this sense.

I may be prolific in opinions; I certainly am not backward in expressing them; but I would not like to give an opinion on the time it would take to become, with all the requisite talents, a thorough, accomplished Dentist. I leave that for others, but I can say certainly not in one year. But I will hazard one opinion, which is, that any young man who will add to one year's study with a *good* operator two years in a good dental college, will gain five years in the first ten of his practice over any other course known to me. The fact is, *the secret* of Dentistry cannot be bought and sold a sudden acquisition. As well might you hope to buy the physician's power of forming a proper diagnosis of disease, the surgeon's use of instruments, joined to the skill of the watchmaker and jeweler, for neither exceed what we ought to perform.

* * *

Sincerely yours,

JOHN S. CLARK.

ECLAT.

The honestly proud heart swells with emotions akin to gratitude when, under a full consciousness of having done well the world takes up the note of praise. It is pleasant to live in the sunshine of approbation; but a man must be "*a man for a' that*."

Praise should be the pleasant exhalation from something good in itself—an accompanying zest, not a necessary component.

Your little son, living in the light of paternal approbation, may expect that you will not fail to say "good boy" when he does well. But "*boys of larger growth*" should not depend for their happiness or incentive to well-doing on a pat on the shoulder and a "good boy" at every good deed.

The scholar, after long, tedious hours of almost painful mental labor, finally discovering the long sought solution of the problem, feels a thrill of joy that seems to almost give him new life as his mental vision opens on its new world. His happiness is that he has *conquered*—that he has *acquired*. It is an intellectual joy. The reward comes not from without, but from within. Who has not felt it? And who will say that it is not a just and reasonable happiness? Here then is a constant source of happiness to the patient, faithful, conscientious Dentist, when successfully completing a difficult operation. But even this will degenerate into a cold selfish egotism, unless joined to that life-giving principle, *charity*.

To *feel*, to *know* that you have conferred a lasting benefit on a fellow being, and at the same time to feel that you have, by *skill* and *patient* labor, done *all* in your power to shield from pain, to save from loss and add to comfort and health. This will make the operating room a place of *real happiness*. Happiness that mere praise cannot bestow, and that money cannot buy.

THE SAMARITAN.

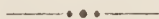
Patients need no information to enable them to tell when they are sick. But diseased teeth seldom give warning of danger from disease "*until nigh unto death*."

Who, then, shall pioneer the Dentist in the road to the greatest usefulness, that of extirpating disease, not of extirmination of those useful organs, the teeth? Who but that noble phalanx of guardians of public health who have ever been the pioneers in the cause of suffering humanity? We call upon them to look thoroughly into this "specialty"

of the "healing art" and ask, is there no remedy for that wholesale slaughter of those precious organs?

We, as a profession, have provided ourselves with elegant instruments of extermination and sacrifice. Our shining forceps vie with the graceful curve of the eagle's beak, and I must say we are from much practice tolerably expert in the use of these weapons. We have studied it, we have practiced it, but for self we are sick at heart of the carnage. Who shall stay our hand? There is "*balm in Gilead*." Is the "*Physician there?*" His holy office is appealed to in the "Sacred Book," as if only found surely ready to succor the "daughters of our people." As a sect or profession in those primitive times they were the very type of humanity's "friend in need." And who but the physician of modern times has erected those living monuments, the most distinctive mark of civilization and christianity in all lands, the asylums, the hospitals for the halt, the blind, the sick and wounded? Time has not changed the nature of their sacred mission nor dimmed the lustre of their deeds. But time has changed that profession in one particular at least, the division of labor.

In primitive times the physician was considered a perfect walking apothecary shop, a pharmacist, practical botanist, aurist, oculist, &c. Now, although a part is entrusted to other hands, yet he is supposed to know all theoretically, that he may be able to direct to the skillful. In other words, he is supposed to know the "Balm of Gilead" from the "deadly Upas." Who, then, but the physician should scrutinize, who direct the "daughters of our people" how to avoid the "Upas" and choose the "balm?"



"THAT WHICH IS WORTH DOING AT ALL IS WORTH DOING WELL."—
Whatever may be the application of this proverb to things in general, it certainly has a peculiar application to Dentistry, for the reason that the best we can do is certainly poor enough.

Dentistry at best is only *curative* and *approximative*. *Curative* as a branch of the healing art, resting its chance of success *entirely* on the *recuperative* process: *approximative* in that, as compared to nature's products, it can only at best fall *far short* of her *original*. If Dentists were *creative geniuses* there might be some margin *beyond duties* for *creations to order*.

ON THE REMOVAL OF THE DENTAL PULP.

BY J. S. CLARK, D. D. S., NEW ORLEANS.

It seems a little surprising that any Dentist should, at this late day in the history of pulp extirpation, still adhere to such discreptions of it as to talk of "drilling it out," "crushing it," &c. We know there are more things in this operation than description, but that is, at least, some index to the conception in the mind of the operator. How often do we hear learned descriptions of operations from those professing familiarity with them, when we know that their knowledge is entirely theoretical, for if they had but tried it they would have found out something that would have prevented their repetition of such descriptions ever after.

In speaking of this operation it might as well be borne in mind that the removal of the pulp from the incisor or canin teeth cannot be considered as indicative of the obstacles attending this operation when performed as a regular operation in all cases of exposure in the different classes of teeth, such as molars and bicuspids.

We do not wish to be understood as wishing to decide as to the manner of operating, but will give a few facts and descriptions of the means by which we have been the most successful; and premise by saying, that on examination of our book of record of operations, we have, for several seasons past, averaged one per day, and that in all cases when the nerve is attacked by disease the operation of entire extirpation is performed. This is our general rule of practice.

The exceptions are, that in some cases of entirely healthy pulps on very slight exposure the actual cautery is applied and the pulp saved alive. Also, in some cases we extract at once without attempting the operation. But never do we fasten up within the fangs the dead pulp or its remains by filling the crown alone.

The nerve or pulp is first treated with arsenic and creosote.

The amount of pain seems to be in exact proportion to the more or less perfect application to the surface of the pulp and the freeness of the opening through the dentine; that is, if the arsenic is applied to the nerve with no intervening covering of dead bone or other substance and the opening through the dentine immediately over the nerve is sufficient to allow of expansion, there will be no pain in the escharotic action. But if the tooth is filled with any intervening substance between the arsenic and the nerve, pain may ensue. Arsenic also seems to act, more or less specifically, according to the perfect or imperfect organism of

the pulp. If it is in its normal state, or nearly so, it takes on the action more perfectly than if partially destroyed or decomposed.

We will take for example an upper bicuspid properly treated with arsenic.

The first step is to open the foramen into the pulp cavity so that the instrument used in extirpation will pass freely, and also withdraw with pulp attached through the same foramen, without encountering sharp or angular edges to scrape off the pulp. To prepare this opening much labor will be saved if instruments are used that will neither cut shoulders just within the canal or force down spiculæ. Instruments that cut toward the hand we have found the best.

As in this tooth (bic.) there are two branches (whether the fangs bifurcate or not,) the foramen is usually oblong, say generally three-sixteenths of an inch long, it is necessary to open freely as well between the extremities as at them. Having prepared the opening and syringed out the cavity carefully, we propose to take out the pulp at two more operations, if possible. To do this, great care is necessary in the preparation of the instrument, which is the finest "watchmaker's broach" which can be obtained from No. 1 to No. 5, the highest number being the finest.

These are carefully annealed so as to be quite soft and tough. Then, with a sharp penknife, barbs are carefully cut on one side of the broach near the point, and for say one-fourth of an inch from it. Great care is necessary in cutting these barbs, that the broach is not weakened so much as to break. A good lens is necessary in doing it to advantage. With a broach thus prepared, the main point requiring particular care, is to pass that fine blade to the foramen at the point of the fang. The blade being barbed on one side only, if care is taken the smooth side may be passed up next the wall of the first half or so of the canal. The broach being carried to the point of the fang, a slight and careful rotary motion and, at the same time, a very gradual withdrawal will, if dexterously done, bring the pulp out from the dental canal.

We have found that all attempts that wounded or lacerated the large part of the pulp before the final operation, always enhances the difficulty, and always avoid introducing drills or any rough or cutting instrument into the canal; for in addition to the laceration, they form shoulders against which the point of the broach is apt to stop or become bent. We will suppose that both branches of the pulp have been removed. Of course the artery being cut off the blood will be discharged into the dental canal. The question arises when is best to fill those fangs? Our experience says immediately, as soon as the blood can be stopped, which we can generally effect by winding some fibres of cotton round the

blade of a broach and introducing it up the canal and cutting it off and letting it remain a short time. It offers compression. After the blood ceases the fangs can be wiped out by the same instrument with cotton fibre wound around the blade.

The teeth we have filled immediately after extirpation have been the most satisfactory, and that is the best reason for the adoption of that mode; but the theory seems to us to be that nature, so to speak, has but one task to perform. We apply pressure and contraction of the blood vessels and absorption takes place and the part heals kindly. But if the canal is left open and she undertakes the same process (without compression too) just in the midst of her effort, when slight inflammation is present, compression is offered and probably a new wound made in wiping out, &c., she has double work to perform, and perhaps more than recuperative inflammation ensues.

The next operation is filling. Several broaches (smooth) are prepared by taking a strip of foil, say three-eighths of an inch wide, and winding from the top of the blade for an inch down from the point, leaving it as near the shape of the canal as possible. One of these is introduced to us near the point of the fang as possible, the gold on the lower part of the blade is grasped with the fingers or tweezers and the blade withdrawn, leaving the gold in the fang. A piece of whalebone, scraped to us near the shape as possible, is then thrust up beside the gold and another loaded broach introduced as before, and so on, until the fang is full to the part within the reach of filling instruments.

There are several points worthy of notice in this last operation. First, how to know the exact distance to the foramen at the point of the fang.

We acknowledge ourself imperfect in the exactness of measure or filling to the nicety that the mental vision can define, and we had rather come a little short of it than go beyond, owing probably to a little hint experience-wise. Our rule is to measure as accurately as possible, and when loading the broach, to let the gold extend a little beyond the point, and then to cut off the gold very near the point, and by hardening the gold by rotating against the thumb nail, close it entirely over the end. This will generally tell when to stop.

The other point is in the tooth described (bic.) The branches of pulp do not occupy a round canal but flatten toward each other, and that so very thin in substance that no instrument will reach it, and of course, unless cut away the whole space cannot be filled.

When the two main branches of the pulp are removed and the supply of blood and nervous supply are cut off, this thin filament becomes as insensible as the periostium lining the canal, and against which we fill

with impunity. Then, although there is a minute unfilled space, still the point of each fang or branch being impervious, no evil consequences need be apprehended.

(To be continued.)

CRYSTAL GOLD.

BY J. S. CLARK, D. D. S., NEW ORLEANS.

We were presented with a sample of this preparation in the summer of '58, while on a visit to New York, by the gentlemanly inventor, Dr. A. J. WATTS, chemist. Beside distributing it among our friends of the profession, we tried it in various ways, and came to the conclusion that although it would not induce us to give up foil, it would form a valuable adjunct to it in filling teeth. Such has been its position in our practice ever since.

We have read, with interest, the articles in favor and against it that have appeared from time to time; and while we think that it possesses many good qualities, there are some very palpable mistakes made in comparing it with foil, to which we desire to call attention.

In reading a "Treatise" on its use by W. F. Dwinelle, M. D., D. D. S., (just received,) we are more than ever pleased and thankful to Dr. Watts for having given to the profession "Crystal Gold"; for, aside from its intrinsic merits, it has produced one great good, that of stimulating to attempts at saving teeth hitherto deemed beyond hope. This is a good omen. How much more gratifying it is to read of the attempt to save, than of ingenious methods of extermination. We have a personal feeling of interest in these attempts; for we have for many years refused to extract a large class of teeth usually sacrificed.

We have another interest in Dr. Dwinelle's essay, which is the sight of a few familiar faces in the drawings of teeth class first under letters from A to J class second. But to the subject, CRYSTAL GOLD.

We heartily concede to Dr. Dwinelle and many others that they have a better right to speak of crystal gold than we have, and are better able to judge of its liberal adoption; for it shows better results under their hands than ours. But as sincerely do we demur to the sentence passed upon foil.

We have no desire to make assertions without evidence; and it is gratifying such men as Dr. Dwinelle have taken the subject in hand to investigate; for we are assured that such men will not be governed by preconceived notions, when the field is open for experiment; and we

suggest to him to lay aside crystal gold for once and try a sample of his own preparation, and we here offer it to any of the profession using crystal gold, in case they should get out of the preparation.

Take the thinnest gold foil you can get and make *small pellets*, as described by Dr. Watts. After you have a sufficient quantity rolled, simply anneal them thoroughly, and under the same instruments and with the same care that you say crystal gold requires, and you have gold that will work just as well, as far as adhesion is concerned, and with the advantage of toughness. You can build artificial crowns or cusps. You can put in fillings that will mill down like plate, just as well as crystal gold, with (at least) no more labor in packing it, and you may be sure that its specific gravity will be as great, if as well condensed. We, therefore, say that we cannot consent to the truth of the assertion that "results are produced that never could have been accomplished with foil." We cannot endorse the idea either that around and through good foil fillings "the fluids of the mouth penetrate through and beneath the lamina, &c. A good foil filling admits the fluids of the mouth neither between the lamina or around its border.

As to the remark that crystal gold comes to the rescue of "a large and important class of valuable teeth hitherto confessedly beyond the reach of foil or gold in any form hitherto known," we have only to say that we do not know what "confessions" have been made, but a pretty near counterpart to "*CLASS FIRST, frail teeth that have lost their anterior and posterior approximal surfaces and have only their buccal and lingual walls remaining.*" And H. I. and J. of class second can be seen in New Orleans that have stood the test of several years and were done WITH FOIL. Also, fillings seven-eighths of a circle beginning and ending on the lingual side of cuspidati and incisor teeth (nerves not exposed) done WITH FOIL. Also, numerous cases of bicuspidates, with but the buccal wall standing, turned into a pretty respectable cuspidati (in shape) WITH FOIL.

Singular as it may appear, it seems to us that crystal gold is destined to teach our profession the difference between *clean gold* and *soiled gold*—between *annealed gold* and *unannealed gold*; for, with one exception, it differs from foil in nothing but that, (conceding it to be perfectly pure gold and in a free metallic state.) We are rejoiced that so many are enabled to put in fillings with it that they could not with foil; for there are few enough at any time that can put in such fillings as are described by its advocates.

Sponge or crystal gold has one quality not possessed by foil. It is its attenuated structure, and being in larger bulk is easier retained in its place while packing against a thin, irregular wall, giving great

facility in introducing very small quantities at a time. With this exception we know of no other quality it possesses not found in foil. If they say that its crystalline form gives a filling of interlocked or spliced fibre, we suggest that that is only the mere facility maintained in packing; for if it is held together by that means it is not a solid filling, such as foil gives if properly managed; for cohesion carried no farther than that, does not form a filling according to our notions of one. But we say that we are heartily glad that something has been found to produce such results as are described, and congratulate the profession on the development.

MEETING OF THE PHILADELPHIA SOCIETY OF DENTAL SURGEONS.

The following "Articles" from the "*Philadelphia Society of Dental Surgery*" we commend to the attention of the Profession. Who is there among us that does not feel the truth and justice of that Code? And who that watches with anxious care the "onward march," can fail to be encouraged by such evidences of progress?

Among other subjects of importance disposed of at this meeting, the following Code of Ethics, previously discussed, was adopted and ordered to be printed for distribution.

CHAPTER I.—OF THE DUTIES OF DENTISTS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR DENTISTS.

ARTICLE I.—DUTIES OF DENTISTS TO THEIR PATIENTS.—*Sect. 1.* A Dentist should not only be ever ready to keep his professional engagements, but his mind ought always to be imbued with the importance of his function, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring, because there is no tribunal, other than his own conscience, to adjudge penalties for his carelessness or negligence. Dentists should therefore be scrupulously loyal to their trust, reflecting that the ease, health, and no inconsiderable share of the happiness of those committed to their charge, depend on their skill, attention and fidelity. They should study also, in their deportment, so to unite tenderness with firmness, and condescension with authority, as to inspire the minds of their patients with gratitude, respect and confidence.

Sect. 2. Every case committed to the charge of a Dentist should be treated with attention, steadiness and humanity. Reasonable indulgences should be granted to the mental peculiarities and caprices of the patient. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which Dentists are admitted, in their professional relations, should be used with discretion, and the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services; none of the privacies of personal or domestic life, no infirmity of disposition or flaw of character, observed during professional attendance, should ever be divulged by him, except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great, that professional men have, under

certain circumstances, been protected in their observance of secrecy by courts of justice.

Sect. 3. A Dentist ought equally to avoid unfavorable prognostications and boastful promises, because they savor of empiricism, by magnifying the importance of his services in the treatment of the case, and abusing the simple confidence of those who best deserve his sincerity. It is therefore a sacred duty to guard himself carefully in these respects, and to avoid all things, in word, action or manner, which have a tendency to bias the judgment or impose upon the feelings of his patient.

Sect. 4. Consultations should be favored in difficult and doubtful cases, as they give rise to confidence, energy and more enlarged views of practice, and eminently tend to liberalize the professional relations of practitioners.

Sect. 5. Hygienic counsel within the proper province of the Dentist, concerning as it does those personal habits which are so prevalent and so offensive in the social life of our country, should be urged the more earnestly as rules of health, for the reason that they promote the minor morals of the patient. Advice, strictly professional, is never impertinent, and is generally authoritative and acceptable in proportion to its respectful boldness.

ARTICLE 11.—OBLIGATIONS OF PATIENTS TO DENTISTS.—*Sect. 1.* The members of the Dental profession, upon whom is enjoined the performance of duties so important as theirs to the community, and from whom are required the devotion of their best efforts to the welfare of those who require their services, have a right to expect that their patients should entertain a just sense of their reciprocal obligations.

Sect. 2. The first duty of a patient is to select, as his Dentist, one who has received a regular professional education. In no trade or occupation do men rely upon the skill of an untaught artist; and in dental surgery, confessedly one of the most difficult and intricate of the arts, the world ought not to suppose that knowledge is intuitive.

Sect. 3. Patients should prefer a Dentist whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional studies and duties. A patient should also confide the care of himself and family, as much as possible to one Dentist, for a practitioner who has become acquainted with their peculiarities of constitution, is more likely to be successful in his practice than one who does not possess such knowledge. A patient should apply for advice in the early stage of the disease, and in what may appear to him trivial cases, that the remedial treatment may be completely successful; and as incipient diseases of the dental system are open to very early detection by proficient in the science, so protective and preventive treatment is more certain and available, than in any other branch of remedial medicine, and should be the more carefully secured.

Sect. 4. The obedience of a patient to the prescriptions of his Dentist, should be prompt and implicit. He should never permit his own crude opinions to influence his attention to them, or excuse his negligence. Preventive and remedial measures are based upon physiological principles, whose agency is not always in apparent correspondence with the means employed to make them available.

Sect. 5. Patients should always, when practicable, call upon their Dentist within the hours appropriated to consultation; they should keep their appointments with rigid punctuality; and they should respect his necessary times of refreshment, recreation and repose. A full practice is so laborious and exhausting, and interference

with engagements so injurious, that a careful consideration for them, ranks among the highest duties of the patient to the practitioner.

Sect. 6. The unfavorable criticisms of friends and physicians, upon the operations of the dentist, ought to be submitted to him for his consideration and explanation, before they are allowed any decisive influence upon the mind or conduct of the patient.

CHAPTER II

ARTICLE I.—DUTIES FOR THE SUPPORT OF PROFESSIONAL CHARACTER.—*Sect. 1.* Every individual, on entering the profession, as he becomes thereby entitled to its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members; should avoid all contumelious and sarcastic remarks relative to the faculty as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have by their labors brought it to the advanced condition in which he finds it.

Sect. 2. It is considered derogatory to the dignity of the profession to resort to public announcements, or private cards or handbills, inviting the attention of the public to particular methods of treatment; publicly to offer gratuitous advice, or to promise radical or extraordinary cures; or to publish cases and operations in the public newspapers, or to suffer such publications to be made; to adduce certificates of skill and success, or to boast of cures and remedies. These are the ordinary practices of empirics, and are highly reprehensible in a regular dentist.

ARTICLE II.—PROFESSIONAL SERVICES OF DENTISTS TO EACH OTHER.—Dental practitioners, their wives and children, have no just claim upon other practitioners for gratuitous services. They may be accorded, for such reasons as arise out of the relation and condition of the parties as individuals, but from the nature of such services they cannot properly be demanded as a comity of the profession.

ARTICLE III.—OF THE DUTIES OF DENTISTS IN REGARD TO CONSULTATION.—*Sect. 1.* A regular dental education furnishes the only presumptive evidence of professional abilities and acquirements and ought to be the only acknowledged right of an individual to the exercise and honors of the profession. Nevertheless, no intelligent regular practitioner, who is of good moral and professional standing in the place in which he resides, should be fastidiously excluded from professional fellowship, nor should his aid be refused in consultation, when it is desired by the patient. But no one can be considered as a regular practitioner, or a fit associate in consultation, who, in his practice, rejects the accumulated experience of the profession, and the aids furnished by anatomy, physiology, pathology and organic chemistry.

Sect. 2. In consultation, no rivalry or jealousy should be indulged; candor, probity, and all due respect should be exercised towards the dentist having charge of the case.

Sect. 3. A dentist who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance: the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting dentist should also carefully refrain from any of those extraordinary attentions or assiduities, which are too often practiced by the

dishonest, for the base purpose of gaining applause or ingratiating themselves into the favor of families and individuals.

SECT. 4. When a dentist is consulted by a patient of another practitioner, in consequence of the absence or sickness of the latter, he ought to limit his interference to the necessary treatment demanded by the case; and when it has been only incidental, and not requiring his own continued attention, on return or recovery of the regular attendant, with the consent of the patient, he ought to surrender the case.



DR. TALBERT'S ADDRESS BEFORE THE MISSISSIPPI VALLEY ASSOCIATION.

We have read, re-read and then read again, the address of Dr. Talbert, in the Dental Register, to see if any excuse could be found for a Dentist occupying the position that Dr. Talbert does, sending out in this, the year Anno Domini 1855, a paper read before a scientific body, containing such instructions as the following (page 177 Dental Register): "Having obtained the required space, and removed such portions of the enamel as may be necessary, we are prepared to enter the cavity. *Three instruments only are necessary, the hatchet, the hoe, and the hard drill. Right and left curved excavators—Excavations bent upon themselves in two or three directions, are good for nothing in removing decay and ought to be discarded.*"

The drill he describes as a worn out excavator, with its neck broken off, and filed to the straight edge like a screw-driver, only with cutting edge; he prepares it thus: "*When hardened as hard as fire and water will make it, then polished, it is ready for use.*" In regard to its use he says: "the operator unaccustomed to the use of this instrument, will be astonished at the rapidity with which he is now able to prepare points in the cavity, which shall serve as fastenings to his plug."

A little further on he says: *If I may be allowed to digress a moment, I will simply enter my protest against all separations produced by India Rubber, Gutta Percha, Wooden Wedges, Cotton, or any thing else, for granting that teeth may thus be separated without injury to either themselves or surrounding parts, the plug itself cannot be finished without the file.*"

In regard to the "hatchet and hoe" monopoly we have nothing to say, only that the sentence passed upon other shapes, that "they are good for nothing and ought to be discarded," sounds more like the gentle chidings of our neighbor *Concha* than the teachings of inductive science.

At most, the "right and left curved excavators; excavators bent upon themselves," etc., are merely inefficient, but not objectionable on account of any injury they cause, and therefore ought not to be brought under such decided proscription. But, that "hard drill," saying nothing about the shape, except that any worker in hard metals can exhibit a better shape for the cutting edge, than that of a screw-driver, what shall we say of the temper?

"Hard as fire and water can make it;" how long will it cut? We would suggest the propriety of his trying a few experiments: say, take a dozen drills or other instruments, and heat them differently, say, from a dull cherry red up to a sparkling white heat, and plunge in water; then, try the same experiments and quench in oil, wax, or tallow, and if more knowledge of the metal is wanted, try drawing the temper to the different shades of "straw color." Now it probably would happen that in that dozen instruments, some would be found quite equal to the "hard as fire and water can make it."

But those arrangements, mechanical we should not have noticed, had the paper not contained that peculiar "protest," for that embraces not only points of taste or mechanical utility, but principles of Dental Surgery, that it becomes all who pretend to practice the science, and especially, "Presidents and Teachers to study well. That "protest" is entered against all separations produced by "India Rubber," or any thing but the file. It must be remembered, that front teeth alone are under consideration. We ask which forms the best margin or orifice to a cavity, *enamel* or *dentine*? In all candor and seriousness we ask Dr. Talbert to examine afresh, the sections of enamel and dentine presented in the plates of "Retzius and Gerber," magnified from 200 to 350 diameters, as given by Dr. Goddard in his work on the teeth.

If fillings on the labial, lingual or grinding surfaces of the crown of teeth are more successful when properly put in through the enamel, and with a perfect enameled orifice, than fillings on the approximal surfaces when disease, and its surface exterminator, the file have denuded it of that coating—to what is it owing? First, and principally, we suppose to the fact of a better substance forming the orifice. It has nature's own covering, the enamel, and a filling of solid gold against that, and finished perfectly to it, comes as near perfect protection as the Dental Surgeon can get we apprehend. We acknowledge that one great cause of the success of those fillings is, that they are generally kept cleaner than approximal surfaces, and so far as that is necessarily so, so far the comparison is not perfect. But which will withstand the decomposing deposits around a filling best, enamel or dentine? Now, let us suppose such a case as meets us very often, a young patient, say from ten to fifteen, has a small cavity between the front incisions, the teeth touch at the point, but no where else, by separating them with, say India Rubber, the cavity is found to be about the size of common pin wire. The enamel has a slight decomposed surface, and by simply polishing or with a thin piece of Arkansite, the surface and orifice can be prepared, and a thorough excavation made without altering the shape materially, or removal of any considerable portion of enamel. After the filling is put in, it can be cut to a perfect surface by a knife edge instrument or a file softened, so that it will not cut the enamel, when tooth and filling can be perfectly polished, and the teeth allowed to return to their nominal position; if properly done, the filling is free from contact with the other tooth. Can there be any doubt that such a filling is better as a preservative than if that tooth had been denuded of enamel by the file, saying nothing about the comparative shape of the tooth. These are not isolated cases. They come by hundreds to Dentists of much family practice.

In looking over the foregoing, we find much cause for regret, policy-wise but not conscience-wise. If there is any thing that we have a distaste for, it is controversy, for it is generally a waste of words and an engenderer of wrong feeling. But in this the course we have marked out (for this Journal) leaves us no alternative. If the Obturator is to stand at all, it must stand the test of impartial reviews of all that is presented to the profession, especially from men of elective position, matters of mere taste, or unimportant points as to opinion, we may leave to their own correction, but when mistakes occur, and instructions are promulged under cloak of authority, contrary to the cardinal principles of a demonstrated science, the duties of our assumed position come home with a stronger claim than tastes or questions of mere policy.

SPONGE GOLD vs. FOIL, AGAIN.

Since our article on sponge gold was in type, we have received the "News Letter" containing an article by Dr. Arthur, on "A NEW METHOD OF USING GOLD FOIL." The article on the 18th page was written on the 2d of April, immediately after the receipt of Dr. Watt's circular, containing Dr. Dwinelle's Address. Of course, we had no intimation of Dr. Arthur's article; and, it was with pleasure that we read that article, after having placed in the printer's hands this sentence: *that it seemed to us, that this Sponge Gold was destined to teach the profession the difference between clean gold and soiled gold, between annealed and unannealed gold.*" (Page 19.) Professor Arthur has thus communicated to the profession the very thing that we proposed to Dr. Dwinelle, or any one who happened to get out of sponge gold. This thing, however, is no recent discovery; for there are many dentists who have seen the same thing tried some years since, and some who have practiced it.

The reasons for advertng to this subject again, however, is not to prove our claim to priority, or the gift of prophecy, for neither belong to us. It is now about five years since we attempted to carry out certain well known laws of cohesion, by forming cylinders and filling with them. Such is our practice now. Our enthusiasm rose so high that we have feared the cognomen of "hobby-rider"; and some of the profession will remember that, at the meeting of the American Society at West Point, August 1853, we were armed with a couple of leaden bullets; and when explaining our manner of filling the two bullets, answered the question by allowing themselves to be united by means of a little pressure applied to two plane (clean) surfaces, or their sides brought in contact. This principle is all there is in that discovery of foil that will work like sponge gold. The surfaces are merely made clean by the file, and the foil rendered back to its normal state, as the gold beater gives it to us ANNEALED. We again say, we are glad that sponge gold has been introduced; but we leave, that to again call attention to what Professor Arthur calls a discovery, the simple fact, that if certain laws are obeyed cohesion will take place. By looking at the "Dental Register," vol. 6, No. 2, page 82, there will be found, under our signature, the following, under the head of Queries:

"We understand that a cohesive union takes place between the lamina of gold brought in contact and pressure applied. Now to fulfill the full conditions of this union we understand, the air must be expelled perfectly."

"Does the cylinder-filling offer any facilities to this expulsion of the air, over an irregularly twisted roll, a crumpled pellet, or ball of irregular lamina?"

This has been our "hobby" (if we adopt that term,) for years, and we now adhere to it as a cardinal principle within our reach, in filling a tooth.

It may be true, as the Doctor says, that "*it is well known that no adhesion will take place between the layers of gold foil, as ordinarily used;*" but it cannot be true that such is the fact always.

It is with much reluctance and real regret that we are compelled to advert so much and so often to "*home-gathered*" facts; but it is with much pleasure, now that we can furnish in this point an illustration, which is worth a dozen assertions from us or any one else. Some years since, a man by the name of Colburn, (I think,) was murdered on our Western frontier. Two Indians were brought to Missouri, as the murderers. Part of the remains, including the maxillary bones and some or all the teeth of the murdered man were recovered; and, on the trial, it became necessary

to identify the remains. Dr. Edward Hale, of St. Louis, Mo., having operated several years previously for Mr. Colburn, was called to the stand, and before examining them, said: that "if they were his remains, such and such teeth would be found, with a gold filling at such a point." One, in particular, he described, and he told the court, that "the gold would be found in a solid lump." The remains of the jaws were then examined, the teeth found as he described, and the one he spoke of in particular, (a lower molar, I think,) was broken open and the filling rolled out a solid mass. Our recollection of it, is, that with slight trimming (and it would bear it,) it would make a tolerable rifle ball, and it would be sufficient to kill the wolf, the mark of whose teeth appears on the specimens named.

It was among the first hints that we received seventeen years ago, that in filling, we made one mistake, that of handling the gold with the fingers, and the statement then made that soiled gold will not cohere, we have ever since considered a truth. The experiments we have proposed in the preceding article, of "Filling Teeth," we have performed carefully, faithfully, and often in the presence of numerous dentists, so that we think "we speak that we do know" on this point of cohesion.

We will make an offer, however, which is, if Professor Arthur will send us a book of Abbey & Sons, or Dunley's foil, we will, in presence of good witnesses, (of our profession,) put that foil (without melting,) into the shape of good gold plate and return it to him in that state.

Again must we express gratification, that such men as Drs. Arthur and Devinelle have paid so much attention to the developments under the use of sponge or crystal gold. We know of no two gentlemen of the profession, who, we think, would do the subject more ample justice.

DENTAL COLLEGES, SOCIETIES, AND PERIODICALS.

We have just received the April numbers of "*The American Journal of Dental Science*," "*The Dental Register of the West*," and the "*Dental News Letter*."

For the first time has the desire for more room come home to us in the shape of a want, for the journals come laden with much of their constantly increasing interest, and we feel disappointed at not being able to extend the size of the OBTURATOR, so as to embrace such matter as we would be glad to copy. We do not like to commence by apologies, but really must ask indulgence for the liberty taken in clipping, where we should delight to copy.

The "OHIO COLLEGE OF DENTAL SURGERY."—The commencement exercises of this institution took place 23d of February. The degrees were conferred by Rev. Dr. Aydelotte; Valedictory by James Taylor, M. D., D. D. S.; and reply by H. Munro, D. D. S., one of our graduates. These addresses are published in the Dental Register, by special request of the class.

The following gentlemen composed the graduating class: J. Douthett, Xenia, Ohio; H. Munro, Lebanon, Ky.; E. J. Jones, Dayton, Ohio; R. C. Reid, Xenia, Ohio; W. A. Cornelius, Covington, Ky.—[*Dental Register*.]

The "BALTIMORE COLLEGE OF DENTAL SURGERY," held its fifteenth annual commencement on the 1st of March. The exercises were opened with prayer by Rev. Dr. Johns, after which was read by the Dean the following list of graduates, with their subjects of theses:

Samuel Belford, Pa., Exostis; De Witt Clinton Benbow, N. C., Carving; John

Henry Bond, Md., Inflammation of the Mouth and parts adjacent; George Jacob Conner, B. A., Pa., Ether and Chloroform; Joshua Caleb Curry, Ga., Preservation of the Temporary Teeth; George Richard Hy. Duff, Ky., Arsenic; Ferdinand J. S. Gorgas, B. A., Pa., Dentistry as a Profession; Hugh McGinnis Grant, Va., Dental Caries and its Treatment; Chapin Bond Harris, Md., Salivary Glands and the Saliva; West Harris, N. C., Insertion of Pivot Teeth; Randal Duke Hay, M. D., N. C., Refining Gold; Benjamin Dorr Hyde, Md., Glandular System; John Jones, N. C., Disease of the Maxillary Sinus; James Warner Kilpatrick, N. C., Caries of the Teeth; Anderson Roscoe Miller, N. C., Evacuants; George Washington Pelletier, N. C., Dental Caries; Addison Exum Ricks, N. C., Sympathy; Rufus Scott, B. A., N. C., Anæsthesia; William Shakespeare Tate, N. C., Structure and Diseases of the Teeth; Theodoro Suzzara Verdi, Italy, Eruption of the Dentes Sapientie; James Thomas Walton, Va., Relation of anatomy and Physiology to Dentistry; John Henry Wayt, M. D., Va., Labium Lepotium in connection with Fissure of the Palate; Wm. G. Westmoreland, M. D., Ala., Constitutional Effect of Diseased Teeth and Gums; Joseph White Wilev, Pa., Cancrum Oris; Adoniram Judsen Wright, N. Y., Mechanical Dentistry.

The Graduates then received their Diplomas from the President, and were afterwards addressed by Dr. Wm. H. Dwinelle, of Cazenovia, N. Y.

The PHILADELPHIA COLLEGE OF DENTAL SURGERY held their third annual commencement on the 28th of February.

The exercises were opened with prayer by Rev. Dr. Dowling. The Degree of Doctor of Dental Surgery was conferred upon the following gentlemen; D. S. Hutchinson, Pa.; Jeremiah Hayhurst, Pa.; E. G. Cummings, N. H.; Samuel Walton, Pa.; James Bryson, Tenn.; James A. Butner, N. C.; David W. Hogue, M. D., Scotland; Daniel McFarlan, D. C.; Vinecome Shinn, Pa.; John Levering, Jr., Pa.; Jethro J. Griffith, Pa.; Jacob S. Simmerman, N. J.; Joseph P. Cornett, Pa.; Aurelio Letamendi, Cuba; W. H. Freeman, M. D., Pa.

The Honory Degree of Doctor of Dental Surgery was conferred upon Hudson S. Burr, M. D., of Philadelphia.

The usual Valedictory Address was delivered by Prof. Robert Arthur.

The exercises were enlivened by a band of music, under the direction of Mr. B. C. Cross.

After the commencement, the Faculty, the class and a number of invited guests, amounting to about one hundred, assembled at Parkinson's saloon, where an elegant collation, on temperance principles, awaited them. Many good speeches were delivered. Dr. J. D. White, the Dean, was called on, but merely made a few remarks alluding to his position, which, although it did not preclude him from speech-making, yet made his duties lie in another direction—that of welcoming and seeing to the enjoyment of his guests. The evening passed away in the happiest manner, and the company separated, well pleased, at a late hour.—[*Dental News Letter*.

The ALUMNI OF AMERICAN COLLEGES held their third annual meeting March 1st, in the hall of the Baltimore College of Dental Surgery. The President, Dr. W. W. H. Thackston, having been prevented from attending by sickness in his family, the meeting was called to order by Dr. C. W. Ballard, first Vice-president. The opening Address was delivered by Professor A. A. Blandy. The reports of committees and papers of gentlemen appointed at the preceding meeting were ordered to be published. Ten or fifteen persons were admitted to membership.

The officers for the ensuing year are—Professor Robert Arthur, *President*; Dr.

C. W. Ballard, *First Vice-president*; Dr. W. H. Dwinelle, *Second Vice-president*; Professor A. A. Blandy, *Corresponding and Recording Secretary*; Professor P. H. Austen, *Treasurer*.

The Society adjourned to meet in Philadelphia, on the day of the next Annual Commencement of the Dental College of that city.—[*Amer. Jour. Dental Science*.]

THE MISSISSIPPI VALLEY ASSOCIATION held its eleventh annual meeting on the 21st February, in the Ohio College of Dental Surgery. Opening Address by Dr. W. H. Goddard, President of the Association. Also, addresses on alloys by Geo. Watt, M. D., D. D. S., and on preparation of Cavities for filling teeth, by A. S. Talbert, D. D. S.—[*Dental Register*.]

The Editor of the *American Journal of Dental Science*, in speaking of the Valedictory of Dr. Dwinelle, asks for it a better fate than is usually accorded to valedictories, that of cursory examination. It needs not our praise, but most sincerely do we endorse his remark, that "the most careless reader cannot fail to be roused by its eloquence, while to the heart of the thoughtful and the high-minded, it will speak cheering and encouraging words in their efforts to raise our art above the degrading influences of ignorance, unskillfulness and quackery."

We would bespeak the same attention to the valedictory of Dr. Taylor, of the Ohio College, and Dr. Goddard's Address to the Mississippi Valley Society, published in the Register. They are all worthy the archives of our profession.

RECEPTION ROOM CARD.

In visiting a Dentist, it is to be presumed that the patient is actuated by a desire to be benefitted, and that all the benefit of dental surgery, applicable to the case, is also desired and expected.

Your Dentist can do this in one way only, which is, that by his possessing your entire confidence you allow him to be the best judge of what operation shall be, and how it shall be performed, that he may use, in your case, all the skill he is possessed of applicable to it.

The one you have selected is worthy of such confidence, or you have made a mistake in the selection, and if you withhold from him the full confidence accorded to your physician or surgeon, you are desired, nay kindly entreated to abandon the choice.

Your Dentist intends to treat you with politeness. His idea of professional politeness is, that it amounts to simple kindness.

But politeness, in a popular sense, may assume many garbs. It may wear the garb of pleasing mannerism, by gratifying concessions to the tastes and wishes of others.

It may encrust itself in cold, ceremonious conventionalities to keep disagreeables at a distance. It may play parley with compliment, pandering to ignorance, false notions, wrong estimates, and gain popularity by pleasing false tastes.

It might seem polite in the Dentist to accede to a parent's wish that the child might be deceived with false representations of the pain of extracting teeth; but it would not be kind.

It might be deemed polite to grant the desire of patients that the Dentist should, to abridge time, perform the operations of days and the treatment of weeks in one day; but it would not be kind.

It might seem polite to place in the teeth or mouth impure metals to order; but it would not be kind.

It might seem polite in a Dentist to extract a child's or other patient's teeth to order, that the operator knows ought not to be extracted; but it would not be kind.



NEW ORLEANS DENTAL DEPOT.

We would call attention to the advertisement of Hyde & Goodrich. As will be seen, they keep many articles for Dentists' use. Their stock of teeth is from the manufactory of Jones, White & McCurdy, of whose teeth by the way, we notice two things.

Firstly, teeth to bear the comparison and be pronounced "*as good as Jones White & Curdy's*" must be *good*, unusually good.

Secondly, they certainly do accomplish one thing at least nearer our ideas of perfection than is usual, which is, they offer uniformly a regularly graduated variety of shades. It amounts to very little to say that, because accident has at some propitious moment produced a tooth whose peculiar tinge cannot be produced by design, and to say that Jones White & McCurdy have not been prolific in accidents. We remember to have seen some of such accidental productions from Stockton's Manufactory, but that celebrated laboratory failed to give to the profession, shapes, sizes, and colors, systematically arranged, and a Dentist might fail to match a tooth from a peck measure full; but we need not tell the Profession what these teeth are, for they (help) speak for themselves. Hyde & Goodrich sell their teeth at wholesale, at the manufacturers prices, but for a single or a few teeth they are compelled to charge more. In waiting upon a Dentist, and giving the time of a clerk that costs them from \$1000 to \$1,500 per year, it cannot be expected that they can do it for 3 or 5 cents profit on the transaction, as it is well known that we are all rather slow and particular in our selections.

There is one great importance to Dentists in sending orders, which is, that they shall be able to rely on being promptly and faithfully served, and that the quality of the article shall agree with the order or representation. Our Profession may be assured that any thing coming from Hyde & Goodrich will always fully realize representations.



WARPING OF PLATES IN SOLDERING.

This subject has called forth numerous articles for several years in the Journals, and the plans proposed are familiar to all who read. It seems to us that two or three things only are necessary to enable us to avoid (at least) some trouble from this source.

First, Fine metal.

Second, plates stretched into shape instead of crimped.

Third, good joints and but little solder, and no union between the backings.

The stretching we accomplish by what we call dapping; this is done by taking the plate and placing it on the male cast, then taking a piece of sheet lead (say $\frac{1}{4}$ inch thick), laying that over the plate, and with gentle blows from the hammer it

is brought up pretty nearly before the application of the matrix and a fresh cast. Of course, the plate has to be frequently annealed during the operation of dapping.

If a plate is merely sprung or crimped into shape, the tendency in annealing is to take out that spring or crimp, but if it be stretched into shape and frequently annealed in the process, it will change but little if any, and by this manner of bringing up plate we have succeeded in avoiding much trouble, although we are free to confess that our gold plates will change more than platina ones.

TO THE PROFESSION.

The first number of the Obturator has been issued, and sent to as near a full list as possible, and we now ask (we do not beg nor do we demand), will the Profession, especially South, assist in maintaining a Journal here. We want two things; we want interesting matter, and as paper and printing is somewhat expensive, we have no objections to receive a couple of dollars from any one who feels enough interest in it, to desire its success.

There is one thing about the Obturator that we think all Dentists "*who are clean*" will favor. It is this, it will not be conducted in an antagonistic manner, but it will keep its columns free from the least stain of interest. It is the child of sacrifice, and it shall belong to no one and know no interest but that of the Profession. The question is, will we of the South "*make our mark*" and place our "*block*" in the "*Monument of Dental Science and Art.*"

All letters should be addressed to either,

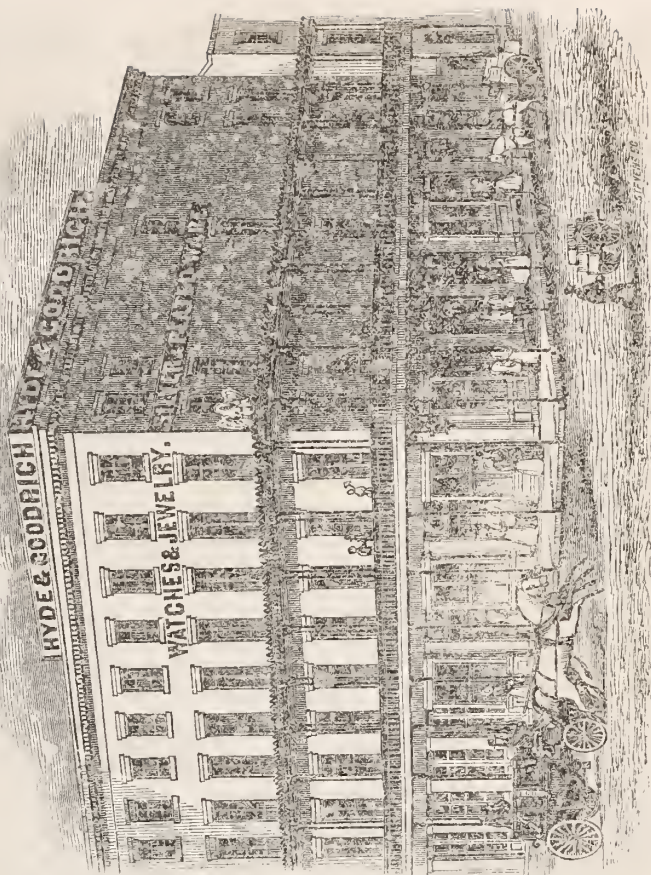
Or to the Publishers,

DR. JOHN S. CLARK,

121½ Canal St., New Orleans.

H. D. MCGINNIS & CO.,

36 Camp St., New Orleans.



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CORNER OF CANAL AND ROYAL STREETS,
NEW ORLEANS,

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Beg leave to inform their professional friends and the public, that in addition to their very extensive stock of WATCHES and JEWELRY, they have a well assorted depot for DENTAL TOOLS and MATERIALS; embracing

DUNLEVY'S CELEBRATED GOLD FOIL OF ALL NUMBERS,
GOLD PLATE of 18 and 20 CARATS FINENESS.

JONES, WHITE & McCURDY'S PORCELAIN TEETH.
of every shade and size.

WATT'S SPONGE GOLD, CHEVALIER'S INSTRUMENTS.

Scalers, Drills, Burs, Pluggers, Stubb's Separating and Stump Files,
&c., &c.

☞ All orders attended to with accuracy and promptness.

THE N. Y. TEETH MANUFACTURING COMPANY, No. 401 BROADWAY, N. Y.

Have the pleasure of informing you, that they are now prepared to fill orders for

TEETH OF ALL DESCRIPTIONS,

including those for Continuous Gums. Also,

Gold and Silver Plate and Wire.
Gold Solder, 14, 16 and 18 carats.
Platina Plate and Wire.
Gold and Tin Foils.
Corundum Wheels, Slabs and Files.
Bench Tools of all kinds.
Impression Cups.
Soldering Lamps.
Mouth Blowpipes.
Self-Acting "
Hand and Foot Lathe.
Brush Wheels and Brushes.
Polishing Powders and Ronge.
Plaster of Paris, or Gypsum.
Varnish for Casts.
Plate-Shears, Pliers and Punches.

Operating Chairs.
Spittoons.
Instrument Tables.
Wax—White and Yellow.
Instruments of all kinds at manufacturers' prices.
Tooth powder—boxes and jars.
Tooth Brushes, and Floss Silk.
Painly's Tooth Polishers.
Materials for making Teeth—crude and prepared.
Prepared Materials for Continuous Gums.
Arkansas Oil Stone.
Works on Dentistry.
Stubb's American and French Files.

Block Teeth, Teeth Mounted, and Continuous Gums made to order for the Profession.

Together with all articles of every name, used by Dentists. Orders will be filled without delay by the Actuaries of the Company who are experienced in the practice of Dentistry and sale of Teeth; consequently, Dentists may rely upon having their orders filled with strict regard to description and the requirements of each case.

Respectfully,

SOLYMAN BROWN,
CHARLES S. MILES,
JOHN M. CROWELL,

RELIEF FROM DEAFNESS.

To those afflicted with Deafness, more especially ladies, the subscribers would give notice, that they have procured from London some ACOUSTIC AURICLES, of an improved construction, which are a great aid to the hearing, and can be worn without any inconvenience, and upon ladies can be entirely concealed by the hair. They can be worn or laid aside at pleasure like an ear-trumpet and are very much more effective and convenient. Reference can be made to many who are now experiencing benefit from them. They can be sent by mail to any part of the country; and the price is from *Ten to Fifteen Dollars* a pair. Those at *Twelve Dollars* are the most convenient size for ladies. Address

HYDE & GOODRICH,

Corner of Canal and Royal, *New Orleans*.

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☞ We are engaged in this branch of business exclusively, and by constant personal supervision in all its departments, are prepared to furnish an article of great uniformity, and admirably adapted to the wants of the DENTAL PROFESSION.

Orders enclosing cash solicited, and the Foil will be promptly despatched by express, mail or otherwise, as directed.

THE DENTAL OBTURATOR.

OL. I.]

AUGUST, 1855.

[NO. II.

OBTURATOR CHIPS.

It is an old adage, that "it is an unclean bird that fouls its own nest."

In our own profession, the truth of this is fully recognized in the forbearance and absence of tirade against unworthy malpractitioners. But, as we have been taught, there are plague spots that call upon us, ye surgeons, to apply the cautery, so in our communications with each other, as we would in any great dispensary filled with subjects, the knife and cautery become legitimate instruments, and he must wield them with a true surgeon's skill who is so fortunate as to excise and extirpate the mere excrescences of error in our profession. As we have said in another place, we are in a great measure responsible for the main influence that emanates from it, and we have a right to speak with full-toned meaning of its errors, its abuses of privilege, and its recreant principles.

The profession of medicine is but the parent stem to which we belong as one of the branches, and from which we ought to receive life, health, and sustenance; and by authority of such paternity, we claim the right to call the attention of the conservators of her interests to a few popular errors. By popular, we do not mean accepted or endorsed, but a species of exostoses that cling to that, our "foster-mother" profession. We are not for the "Sangrado" sneer of contempt that some lofty excrescence on that noble trunk affects towards us as a profession. The same luminaries of science light our pathway. The same principles of benevolence toward imperfect suffering humanity employ our best energies, and cheer us in our daily toil of alleviation; and the same fitness, by requirement, both in quantity and quality, is demanded for a successful practice, joined to no common skill as artists,—artists that could compete with the world in samples of high art and genius. We have sought for a single parallel in the world of art, science or profession, as to the extent and versatility of talent and acquirement required, but the world is a blank in such samples. There are none. The life of a dentist of full qualifications, joined to an assiduous attention to his calling, will form the history of a scholar, a man of science, an artist of the highest order of talent.

Whose fault is it that in our cities and all along the hills and valleys of our land, such histories have not marked the footsteps of the "army of occupation," and from whom our medical brethren have received their impressions of our standing or usefulness as a profession? Who have they employed in their families? Who, by cards of reference, recommended to their friends? Has the untaught fledgling of some workshop or dental laboratory been able, by mere pretension, to impose upon the educated physician? Has he been able to blind the physician's eyes to his own want of knowledge and skill, until samples of miserable blundering stand in the physician's estimation, as all that could be expected of a dentist? If so, no marvel that he now considers the profession a "trade," the practice a mere handicraft.

But it is too bad that we should suffer, first, depreciation by their help, and then contempt, for the very position that they have been parties to forming. In a court of law if, in suit for libel, the defendant pleads common fame in defense of the act, the court will instruct that they cannot plead the common fame that they themselves have created, in extenuation. But in our profession, we suffer from the common fame that the physicians assist to produce, by their ignoring almost every really scientific principle as applied to dentistry. Now, gentlemen of scalpel and the mystic (R.) sign of Jupiter, are there not demonstrated truths enough in our specialty, to call for a class of men, (no matter what you call them) who ought to accomplish more than you accord to us, in the shape of common fame? If so, have you not some duties worthy your attention, in the aid that you, as men of science, ought to give? Show us what you have discovered ought to be expected from this class of men; point out the causes of failure, and then complain that the men cannot be found who will accomplish it, and we will hang our heads in shame.

We wish to be fully understood in these plain words. We do not apply them to the profession as a profession, the embodiment of medical science; for there she stands "*sans peur, sans reproche*," and her true followers are the true devotees to all that ministers to human weal. Our popular reproach comes from the fact, that pretence has "stolen the livery of the court of (science) to serve the devil in;" but these prejudicial influences of which we speak come not from men "who have climbed up some other way," but from the authorized and real sons of *Æsculapius*, and from many whose student-life was that of scholars, the substratum of whose acquirements was laid in science, whose erroneous opinions have weight, and therefore are the more hurtful to us. It is an undisguised fact, that the mass of men who stand by our bedside when

sick, who watch and counsel our children, whose words are laws to us and them in all that concerns health and regimen, have neglected to pursue, in their after student-life, the investigation as to the structure, the normal and abnormal developments, diseases, and vicissitudes of the occupants of the Dental Arch.

Will they tell us that it is too insignificant a subject for their investigation? That "they have no time?" Will they tell us that we magnify in importance our specialty? Will they think so when, 'mid the wild echoes of anguish, they stand with the afflicted mother over the dying child, whose death-throes were caused by impeded dentition, when a full knowledge of this specialty would have saved it?

Will they think so when the stertorous breath tells the tale of compression through the medium of a branch of the fifth pair? Will they forget that the ramifications of part of that pair end in the dental pulp, and that inflammation (increased circulation) is denied expansion by the osseous walls of that dental canal, and the whole pressure transmitted back through that branch to the brain and every sense? Can there be found in the whole system a more facile arrangement for the taking on of neuralgic influences, than the nervous connection of the teeth with the very seat of sensation and vital functions?

Is there another parallel in the whole structure where the nervous filament is thus exposed unshielded to the common attack of external disease, as is presented in the dental structure? So sure is it to take more than its share of disease, that it stands as a sort of thermometer of health, showing the first signs of deviation from the least physical depreciation or imperfection. It is as though the tender flower that drinks in genial air and lives in the warm sunlight should, on the first withdrawal of the genial rays, upturn its tendril root points from the shielding earth to be exposed to the coming storms.

Our "alma mater" teaches us the mysteries of Physiology. Takes she no note of one of the first laws of life, the purity of the air we breathe? She teaches us that air loaded with exhalations from decomposing animal or vegetable decomposition is highly deleterious to animal life. Do they call to mind the decomposing laboratory of the mouth filled with diseased teeth, over which passes the constantly inhaled air to the lungs, saying nothing of the concentrated essence that is sent down into the stomach to help digestion? We might speak of the excruciating pain that invades most of the families in which they practice, and of the common humanity of the effort on their part to shield them. It may be a small thing to some, that these hours of anguish are endured. But take the aggregate experience of the patients

to whom they minister, and it would probably be found that the permanent and enduring horrors of their whole lives will sum up in two words,—toothache and dentist; three-fourths of that suffering has arisen from neglect, from applying to dentistry as a cure of pain, not a preventive by proper treatment of disease. But it has been found an easy prescription to say, “have it out;” for there seemed to be an end of it. We will leave the importance of the teeth in mastication to the reflection of the profession, but have they ever suspected that in the formation of the dental arch, forming a focus of delivery for the air from the lungs, any benefit was to be derived from such an arrangement.

We will only offer the single fact, that many persons, to our knowledge, wearing full upper dentures become perfectly prostrate and some undergo severe illness from their temporary removal. The usual fact is, that persons wearing full upper sets fail to feel the common refreshing influences of sleep when retiring without their teeth.

But we forbear, for there is a commendable spirit abroad, in the medical as well as other professions, and their power of investigation is amply sufficient without hints from us. The only thing we desire is, that it be exercised in a careful examination of our profession, as it (the profession) ought to be, and as it might be with all the help that men of science can give us. We assure the profession that they would be perfectly astonished at the ideas that some of their number entertain, of not of our profession merely, but of the diseases incident to the practice and even of the structure of the teeth. We had the hardest work lately to convince an M. D., of large practice and long experience, that in touching the neck of a lower cuspidati at its junction with the gum, we did not touch the nerve.

A physician, also an M. D., came to our office and desired us to “kill the nerve” in an old fang of a tooth that had been thrown up from its socket and had been wandering about, for at least three years, and was then three-fourths of an inch from its original position.

A physician of twenty years’ practice, an M. D., a copious writer on medical science, a teacher, a medical author, and a man of extensive practice and of well deserved standing and influence, was alarmed at the removal of a scale of salivary calculus from his teeth of the thickness of a half dollar, giving as the cause of his fear “*that it would make the tooth decay,*” and that “he thought it preserved the teeth.”

Numerous have been the cases of physicians who have, by poultices and other external applications to supposed tumors, and for pain in inferior maxillary bone, brought the pus from an ulcerating tooth through externally, causing an ugly issue and disfigurement of the face, and the

bullet holes that we see in hundreds of faces show that such blunders are not unfrequent.

These are only a few of the more apparent bold relief cases. They might be greatly multiplied. But enough they are, to show cause of complaint.

Is it to be wondered at, that meeting in the high sanctuary of science such evident want of attention to what we feel an important branch of the healing art, we should speak as men who have been "wounded in the house of our friends."

From the days that science was called in to patch up poor imperfect suffering humanity, her mission has been that of full and universal benevolence. Her footsteps have not only crossed the threshold of the high and noble, and attended the call, not only of the "golden bowl" and "silvery cord" of vital mysteries, but her willing feet have attended the simplest form of human suffering. Her gentle footfall has waked the muffled echoes of silent midnight, satisfied if she could but minister to the slightest "ill that flesh is heir to." Her parental eye watches with tender care the painful march from the cradle to the grave, and we can claim our paternity only so far as we imitate her virtues and practice her teachings.

ATMOSPHERIC PRESSURE PLATES.

In the April number of the Dental Register, Dr. John Harris asks several questions in regard to air chambers with plates, &c.

We do not intend to attempt to answer those questions, for the simple reason that we cannot, and like Dr. Harris, we are anxious for a solution of the same questions, and we confess to the same state of uncertainty in regard to the establishing of a principle that shall tell us when to adopt the central cavity with full plate, or the ridge cavity with narrow plate, and when to use a plain plate with no air chamber at all.

We find ourself adopting all these styles after a careful study of the different cases presented. We do not design to go into the discussion of the subject at present, for we lack really decided opinions on the subject. Our object at present is, to call attention to one fact that we are sure of, which is, that a full plate extending over the alveolar ridge far enough to fill out the muscles of the face to near their normal tension, and to offer the contact of a round edge to them, will never fail of a good "suction plate," if fitted accurately with or without the central cavity.

CONTINUOUS GUM.

It is now some four years since the Profession commenced applying to sets of single teeth, mounted on platina plates, a gum in body, making what is called "continuous gum work."

It ought to be time that this style of work should stand somewhere in the scale of practical utility, but for some unexplained reasons there seems to be a sort of an undefined hesitation on the part of many in regard to its merits. Whatever may be the difference of opinion, as it regards individual merits or the feelings in favor of, or prejudice against this style of work, there are a few points of real interest and worthy the careful attention of the profession at large; for we all meet on neutral ground when examining anything involving points of progress in attempts at greater perfection in our labors. These points we will attempt to present for consideration. Whoever reflects on the changes that have marked the history of artistic dentistry for the last fifteen or twenty years, cannot fail to remember and compare the attempts then made to supply the mere loss of the crowns of teeth, to the present attempts to fulfill the higher indications by replacing not only teeth, but lost or absorbed alveolar, by imitations of its normal shape as well as the color of its mucous covering.

It is true that at the present day, dentistry, as a "trade," supplies the unfortunate with teeth fastened on the contracted ridge of alveolar, and that is called dentistry which would disgrace the hand of a tinner's apprentice. It is true that dentistry, as a trade, pays no attention to abnormal expressions of the face, caused by absorption and contraction of the dental curve, and considers the sunken cheek and approximating nose and chin as no concern of his; for his business is the "*tooth business*," and all he has to do is, to put in teeth on the ridge as he finds it, although the once rounded contour has assumed the shape of the letter V. Not so with the dental artist. The replacing the teeth, with even proper articulation, is but the beginning of his attempts at restoration. He knows that there are muscles that having been thrown out of their normal use, the expression of that face has become changed and unnatural, and he attempts to reclaim them in some measure, at least that the lines of premature age may not invade the sanctuary of youth and ghastly grins usurp the seat of smiles of beauty.

These may seem like fancies to some, but we pity the man in our profession to whom they come not as practical truths, for he loses much of the happiness incident to the life of the dental artist.

We shall assume that such is the desire on the part of our profession, and that anything adding facility to the accomplishment of this more perfect restoration of the "human face divine" is of high interest to us all. Let us go back to the time that the first attempts were made to this end. We remember well the samples of gum teeth that looked like assorted butter beans that had become stained with a feeble wave of cochineal on one end. But with what eagerness even these were sought after and adapted to the mouth. Then, as we were supplied with gum teeth with well defined crowns, and then, when the days of painting gave way to the production of gum put on the tooth in body, and finally, the curved gum adapted to the shape of the alveolar border.

These are achievements for which we all feel indebted to the laboratories of the enterprising American artists. We were getting on swimmingly. We could put up beautiful sets of entire or partial dentures, we had our furnaces for melting and refining gold, our mills for rolling and our assistants in our laboratories so expert that in the shortest possible time we could get up these pieces with elegance.

But in the midst of our gold mounted prosperity, we were called upon to curtail greatly the use of gold and those elegant gum teeth, and use in their stead platina and teeth of different shape. The idea was revolting. What, give up the rich and luminous rouge polished gold for that white silvery looking metal? We declared we never could do it. Then the increased labor, for after spending twice the time in getting up the plate, then the backing the teeth and soldering with pure gold again, twice the labor and heat required, and then, when a gold piece would be ready at the same point to finish up, this is only half done, and to do that other half we must have a small imitation of the "fiery furnace" of old.

But after all, some of us have passed the "fiery trial" and still continue to enact its orgies. Of course, those who have adopted this style of work for full sets must have had good reasons for doing it, and VERY STRONG ones for continuing it. These reasons, as they now appear after years of trial, are what we particularly wish to examine. Two points no one will question, (viz) cleanliness and appearance. It must be so that they are more cleanly, being one piece, united teeth and gums to the plate, than single teeth soldered separately, and having interstices around, between, and under the teeth, for the lodgment of food, &c. That they equal in appearance any specimens of single gum teeth, merely ground to a joint between, we think will not be questioned, allowing the color to be as perfect as in the gum teeth, and there is no reason why it should not be. Another point we will notice, by present-

ing a case we have put up this last week. It was a case where there had been great and unnatural prominence in the front teeth and alveolar, so that after the full absorption, the face of the artificial teeth required to stand as far in as the outside of the alveolar border, and the lower teeth did not articulate within a quarter of an inch then, so the incisors needed to be crowded in as much as possible, there was also large absorption from the loss of the cuspidati, and to restore that large depression on each side of the nose, it needed the plate and gum to extend three-fourths of an inch high at that point. Gum teeth could not be used, for the gum was too prominent in front already. Block teeth would not do, for the same reason. Plain plate teeth set on the gum with the plate cut away, would only do for two or three teeth in front. But the continuous gum work allowed of an enameled plate over in front, say the thickness of a piece of paper, and an extension and increased thickness, equal to the demand for the absorbed process above the cuspidati.

We do not hesitate to say, that for this class of cases, no other style of work known to us can fulfill the indications to such perfection, and we should feel that we could not do without this means of overcoming these difficulties, and for these and like cases, we should feel bound to be always prepared to do this kind of work. If it will do for these cases, why should it be discarded in other or usual cases of full sets upper or lower?

After four years' trial, we will state as nearly as possible all the objections. The first and main one is, the increased amount of labor.

The second is, the point of elasticity and liability to accident.

In regard to the latter point, there is no doubt but that a set of teeth mounted with gold will withstand the effects of a fall on the floor or into the washbowl better than the properly constructed piece of continuous gum work, for the separate pieces of which the gold set is composed, and the elasticity of the gold will *perhaps* allow of a fall without breaking, but the perfect inelasticity of the platina and gum material will probably insure injury with every fall, if they strike on the incisor teeth.

There is no doubt but that the last require more care. But who thinks of letting a fine gold or enameled watch fall with impunity? A wax nose will not break by a fall, a porcelain one will.

But the other consideration, that of the increase of labor, is some objection, unless we can find enough to counterbalance it.

This work can be done, we allow, with great facility, if the laboratory is always in order, and the manipulations always precise. So can gold

work be produced with proportionate facility, (by the same care and fixture,) so fix it any way you will, the labor in putting up platina work is quite as expensive and twice the labor, so that there is but one point that can be considered in the matter, and that is the point of perfection and utility after it is done.

Our teeth cost us from ten to twenty cents a piece. Who has not felt (if not expressed it) in certain cases, when the tooth fulfilling the entire indication could not be found, that he would give dollars for a tooth that should just suit the case? Why is this? We take it to be a laudable feeling of anxiety to reach as near perfection as possible.

We see no reason why this feeling should not extend into a principle to guide and govern our entire operations.

We do not, like some, see a grave principle involved in the shade of a cravat or the cut of the beard, but call them mere matters of taste, to be varied at will, but cannot assent to the same latitude of choice in our professional ministrations, so that in the examination of this subject, we land on this basis of principle for guidance, and say, that as we consider this kind of artificial work the best, as fulfilling the highest indication in many cases, we feel bound to produce it in all such cases, and we recapitulate the points developed to our satisfaction, by experience as well as of apparent advantage.

First, it is more cleanly.

Second, it is more perfect in appearance.

Third, it is the only way known to us of perfect adaptation in numerous cases, and that for us to throw away this advantage to motives of convenience, is to discard one of the cardinal principles of our "*indenture*" to our profession.

POPULAR OBJECTIONS.

One says, "I tried it and do not like it, for the gum does not come out all alike. It will spot, and besides it checks and cracks." Clean fingers and articles used in manipulation will remedy the first, and proper care in heating up and cooling off will remedy the latter. Another says, "it breaks and scales off in the mouth." Brace it, as instructed, and that will not occur. But after all, these objections amount to very little, for they are the objections arising from the attempts of beginners, or the mistakes of the unskillful. We have no doubt that there are many who find no difficulty in gold work, who yet find a great deal in attempting this, and most sincerely do we say, that we believe there are many who do passable work in gold, that never can produce a good piece with continuous gum. Also, that there are many other objectors who having found out the difficulties, and perhaps suffered a few fail-

ures, find it more convenient to stick to the old style in all cases, because it is the easiest.

We regard the introduction of this improvement, (for we shall call it such,) as of great benefit thus far, and promising more for the future to the profession. It has improved the manufacture of teeth, both in shape and composition, and thus we are benefited.

But above all, it has done much to artistise, (so to speak,) our productions. We want all for our profession that tends to draw the line between dentistry as a science and art, the result of genius and knowledge joined to high motives of life-long benevolence, and the misnomer of dentistry as a "trade," a bartering with human credulity, a stepping stone to a better speculation. When will the keen sensibilities of our natures cease to feel the pain of insult presented (unconsciously) in our consultations, arising from false estimates of our profession, produced by unfortunate contact with what was called dentistry, but which proved to be malpractice?

Never, never, till she can stand forth the undeviating dispenser of good works, the true friend to the greatest good to suffering humanity, by an exactitude of adaptation that knows no short road pointed out by convenience, or a miserable truckling to false and ignorant tastes. Who is responsible for these false estimates? Where is that pure stream to issue from, that shall wash away our plague spots?

Just as surely as will the pure mountain rill start on its cheering mission, will demonstrated truth of action and deed send forth a healing stream, that ere long will well up into our laboratories and our operating rooms, cheering us in our daily toil.

We are not bound, nor do we advocate the attempt to teach our patients dentistry, but we are responsible to the profession in a great measure, for the main influence that is wielded by our patients in regard to us as a profession. The dentist of proper qualifications and adaptations to the practice never yet commenced with faithfulness, and persevered by assiduous attention to the best good of his patients that the great influence wielded for our profession by his patients, was not for good, and by whose labors the profession was not enriched in character and usefulness.

INDEPENDENCE IN THE PROFESSION.—The practical dentist is often called upon to exercise a noble independence of feeling in his professional intercourse. Never fear your patient, nor dread his influence. Do what is right, and demand respect for your opinions and skill.

THE USE OF THE GUM LANCET IN EXTRACTING.

WE have often wondered which conferred the most useful lessons productive of real practical progress in our manipulations, our blunders, our studied attempts, or our necessities. Who has not in his case a broken instrument that he would be loth to change for any other? Who, by "taking thought," could master the thousand and one things that his fingers know from experience, and which they found out when the mind was not searching for the hidden secret?

The gum lancet was a time honored instrument before the Caldwellian discovery of the "Dens ligamentum."

We will simply say, that almost ever since those days of "separating and dividing," we have, as a general thing, discarded the use of the gum lancet. That is the habit or rule. The exceptions are, perhaps, one case in one hundred.

We consider it an improvement: how did we come by it? By no theorizing, by no itching desire for something new and wonderful. Our inductors were accident, necessity, and attention in the comparison of results, something in this wise: After half an hour spent with a very nervous patient, endeavoring to bring him to the "courage point," the propitious moment at length arrived. He opened his mouth, but our gum lancet just at that juncture took a look behind an adjacent piece of heavy furniture. The forceps lay at hand, and in one moment was placed on the tooth, carried up to the alveolar, and in another moment the tooth was out. We had extracted, a short time before, its mate across the mouth, which was excised in the most approved style; and in the latter operation we received the decided assurance from the patient that the pain was less. To us the operation was the same. To the patient ditto, minus the cutting. We looked carefully to the forceps and its application to the neck of the tooth and separate fangs, laying up a hint to be sure our forceps always fitted thus, and tried the experiment again in the next case, and found two things this time that fitted the case exactly. One was the forceps, the other was, the operation just suited the patient, for it abridged the pain she said one-half. After years of trial, we found that this manner of operating without the gum lancet, had grown into a regular thing, and after some twelve or fifteen years of pretty extensive practice in extracting without it, we feel free to say, that in our opinion, there is nothing gained by cutting round the tooth, either in pain, in the dislodgement of the tooth, or in the force required to do it, and that, with a good fitting forceps, the

gum is just as easily slipped up and the forceps carried to the edge of the alveolar without cutting as with, and with just as little pain in the one case as the other. If so, the pain of cutting is entirely avoided. Then why use it in common cases of extracting?

We have intentionally spoken of this as the general rule of our practice only. There are cases where the gum is much swollen, and in those cases we make our examination of its shape and position with the gum lancet. Then there are some cases of alveolar absorption and an induration present, where the gum lancet will nearly dislodge the tooth or fang, and of course we use it. But in usual cases, if the forceps is fitted to the case, we doubt whether the pain of passing up the forceps to the right point is hardly felt, if it is done dexterously and just at the moment of grasping the tooth, and we have the best reason for supposing the extracting of any tooth under ordinary development just as easy of accomplishment.

SALIVARY CALCULUS.

BY JAMES S. KNAPP, D.D.S., N. O.

If we consider the frequency with which this substance, commonly called *tartar*, is found upon the teeth, and the serious injury sustained by them in consequence of its presence, we must admit that it has received less than its share of attention.

Chemists have analysed it and physicians have written upon it, and some of the latter have had a fine opportunity of experimenting with it upon their own teeth, and, we are sorry to say, have learned little wisdom by this experience.

It is not more than a week since one of our patients related to us the directions of a physician to him, in regard to the care of those "jewels" of his mouth; and was distinctly informed that it was unnecessary to have the tartar removed, that he even allowed it to remain upon his own teeth as a better protection to them, &c.

But we would be far from saying that *all* physicians, ("Our progenitors,") entertain such sentiments, but whence arises this wide difference of opinion between that class mentioned, and those who thoroughly understand the nature of the substance in question, and who well know the effects attending its formation and continuance upon the teeth? We would ask if this question be not already solved in the latter part of this proposition?

In the premises we would admit that certain kinds of tartar may be

allowed to deposit in small quantities upon the teeth, with very little apparent injury, but for look's sake alone, no person of neatness could ever desire its presence. Of course, we allude to the very thin deposit of grey or brown color, sometimes found in the mouths of healthy persons, (not over-particular,) and *secreted* upon the crowns of their teeth, from a line near the gum to another as near the cutting edge, or grinding surface.

But what is most evident in deleterious effects and evil consequences is, particularly in children, that deposit of a green color near the margin of the gums, and also the thick yellow tartar, both with children and upon the teeth of those whose years and experience ought to have taught them lessons of its dangerous tendencies.

Ask him who has so often had occasion to remove it, and will not that dentist tell you, that under that green tartar that has long been deposited, he finds the enamel nearly always rendered partially soft and imperfect, if not entirely destroyed, and disease already implanting itself in the osseous structure, no longer protected by its natural covering. And we would appeal to the experience of our professional brethren, to know if, to the presence of this kind of tartar, is not that kind of decay, perhaps more properly called gangrene, attributable? It is found upon teeth of imperfect organization, the enamel surface being left rough and uneven by nature, serving to retain it, and hence, to our mind, its *action* upon the enamel, and afterwards the dentine.

What dentist, or what physician, has ever seen that thick yellowish deposit, and, at the same time, found the gums of natural health and hardness, or even occupying the place designed for them.

If it were the immediate province of the physician, as it is that of the dentist, to extract teeth lost alone by the wasting away of their alveolar sockets, occasioned by the *long and deep* deposit of tartar, he would not, we are sure, further advocate this strange notion of its *protective* qualities.

Protection! "such as wolves give to lambs, covering and devouring them!" and such as filth would give the face, hiding its beauty, and preventing its natural and proper reflection and expression to the disgusted beholder!

This article is not intended to teach any one, and those who desire to enter more minutely into the analysis of this substance, will find the researches of Enderlin, and the analysis of Berzelius, of great utility.

We will, however, add that it is well known to be composed, principally, of earthy salts and animal matter—phosphate of lime and cartilage or fibrinia, with a small quantity of animal fat.

The ever varying composition of the teeth is here again finely illustrated ; for, as in them, so in the tartar of different individuals and constitutions is found a continual change, the minute analyses of no two showing the same exact proportions. It is sufficient, however, here to remark that tartar of the darkest color is the hardest and most dense, while that of the whitest is the most soft. That of the darkest color adheres to the tooth where it has formed with great tenacity, often requiring great force in its removal, and is found not very readily dissolved in acids.

The proper name of tartar, at the head of this article, indicates what it is and whence it comes, its basis being found in the saliva of the mouth ; and there will be found as great an analogy between the *salivary calculus* and the *urinary calculus*, as is necessary for the reason of any one. Vitiated saliva, as in case of sickness, or under the influence of various medicines, is known to contain a superabundance of this substance. Hence, its increased quantity during sickness, and the necessity of thoroughly cleansing the teeth at such times.

Those who suffer from disease of the glands whose office it is to secrete saliva, or where the mucous membrane is more or less involved, afford another proof of its origin, and the causes of its increased quantity. The location where it is observed the thickest in such cases being near the salivary ducts, the outlets of the secretive glands, the region of the first molars in the upper jaw, and the inner surfaces of the incisors in the lower, representing, first, the buccal, then the sublingual glands, shows us another conclusive proof of what the saliva has to do with this crystalline incrustation.

As to the fact of tartar being really inhabited, the curious can satisfy themselves, by the aid of a good microscope, in regard to the appearance, shape and habits of the occupants of this formation, who reside in an element peculiarly adapted to their tastes and that of the individual who thus bounteously sustains them. We need not fear a material reduction of numbers by "Catching a Tartar."

But whatever may be the composition of the salivary calculus, whatever its appearance or analysis, it is a foreign, and generally, hard substance, and cannot remain upon those delicate and important organs without decided harm ; and if its injury upon the fine, healthy, polished enamel of some individuals be not at once apparent, it cannot be denied that its deposit under the free edge of the gums of the same person is surely attended with disastrous consequences to the edge of the alveolus, and the dental periosteum ; both fading and wasting before it, if not as rapidly, as certainly as the "Dew before the morning sun."

ON FILLING TEETH.

BY JOHN S. CLARK, D. D. S., NEW ORLEANS.

(Continued from page 10.)

IF we have correctly stated the results under this application of the laws of cohesion to the introduction of gold foil into a carious tooth, we are safe in asserting that the union takes place at the lowest possible point of pressure; so that in applying it to a frail tooth, whose walls are thin and easily fractured by pressure, we can produce a filling with less pressure, and consequently more safety, than by the common mode. But the question of safety is by no means the only one.

It must be conceded, that the mere accomplishment of the introduction into a frail tooth of an impervious filling, is of very little use, comparatively; for if we cannot make up, in some good degree, for the loss of strength by the removal of the dentine, the tooth will soon fracture, and our operation fail of much good. Here, too, if the premises are correct, we have the greatest protection that can be afforded to thin, frail walls, for if a filling is placed against the inner surface, that is absolutely solid, it must be better than one that will give on slight pressure.

To test this, take a piece of seasoned hickory, and drill a hole in the end, say the size of the white part of this (○) letter, an eighth or sixteenth deep, then cut the outside to size of the outside of the same letter, fill this cavity with cleau soft cylinders, as solid as you can without splitting the wood. Harden the plug carefully with small pointed instruments, and file it off even with the end of the wood. By passing a point of a knife through the wood, below the filling, splitting the piece, the filling can be taken out and examined, and if done dexterously, it will be found to form a pretty solid and compact mass. To try it comparatively, fill another of exactly the same dimensions, by the mode you usually adopt, or in any way preferred, or with gold in any other shape, and then compare them in point of compactness or density. Weigh them, &c. If there is a case in which sponge gold can show an advantage, it must be in this experiment, for its attenuated structure and asserted facile cohesion, allow of its being packed from the bottom up, presenting but little lateral pressure, whereas the cylinders, we willingly allow are united by lateral pressure. But in every trial, we have invariably succeeded in making the cylinder filling outweigh the sponge gold one.

The next point we present is, the ductility. Pure gold, we know, is soft and ductile. It loses this property by pressure, or at least, its ductility is decreased astonishingly by this means; so that, in fillings placed in strong teeth and properly hardened, the surface becomes as hard (we should say) as iron. Now, that process which gives to it the least pressure, while it causes it to cohere, must leave it at that point the most ductile.

The advantage of this must be obvious to any operator, for in following out the caries in the (so to speak) sutures between the cusps of the molars and bicuspidés, we often have an irregular orifice that requires the gold to be moulded into the irregularities from the surface of the filling, and if it is in a cohered state, but still plastic, can be brought to these irregular and superficial points with much facility, and hardened there by more pressure.

Thus far in this article we have attempted to prove to the careful experimenter, the simple points of cohesion, the facility with which it may be taken advantage of, and the ductility of the metal after that point is reached.

We are now willing to hazard some few assertions, feeling conscious that any one trying it faithfully and patiently will find our assertions accord with his experience. We have adverted to the point of strength imparted to a tooth by a cylinder filling. The arch, in mechanics, is supposed to be the best sample of strength against external force. The cylinder filling, when taking into account the lamina of gold, presents the shape of an arch, and any operator will be astonished at the amount of pressure that a mere shell of a tooth will bear from the condensor. It is undoubtedly the best protection that can be given to a frail tooth, at least as compared with any mode known to us.

By this manner of filling, too, we can always be sure of a perfect orifice adaptation, or in other words, a perfect marginal edge to the filling. Its line will be as perfect as any joint in mechanics can be made. To us, this seems a matter of great importance, because if the other steps in the operation have been well and perfectly attended to, viz., the excavation and condensation, the whole success of the operation is likely to depend on this one point.

Here is the point, that disease usually finds its way into cavities, even of well excavated and well filled teeth, and we will further add of the best fillings ever put in, if foreign deposit is allowed around the margin. We do not absolutely save teeth, any of us. We only remove the disease, and shield the exposed cavities by so perfect an adaptation of gold to them, and by so perfect a surface of the filling and face of the

tooth, that *they can easily be kept clean*. It adds nothing to the negative of this assertion, that many rough fillings have stood the test of years. They are retained in spite of the imperfection, just as many persons retain their entire denture to old age, who never cleaned them in their lives. The common facts are all the other way. These are the exceptions; the rule seems to be, that unless a filled tooth can be kept clean around the filling, it will sooner or later fail, from deposit and decomposition around its margin. We have no hesitation in saying that he who does not polish out even the file marks in the teeth, when they are separated with it, as well as have a perfect surface of tooth and gold, will sooner or later fail in his attempts at arresting disease in that class of carious teeth.

Another advantage of cylinder filling is, that a cavity may be filled that has but two opposing walls, and they may be almost at right angles. It is done with cone shaped cylinders, by springing an arch from one wall to the other; say, for instance, a bicuspid, with the inner cusp gone to the gum.

(To be continued.)

EXTRACTING DECIDUOUS TEETH.

THERE is no natural development of our whole system that has not a deep and utile design, on the perfect progress of which much of the perfect elimination of form, structure, and fitness depends.

The formation of the permanent teeth, under the deciduous ones, forms no exception to this rule. There are certain and regular influences used by nature in their production. There is the osseous contact of the deciduous fang, with the sac of the embryo permanent tooth. There is the continued pressure in its semi-osseous state, and this pressure is continued (normally) during the almost entire absorption of the deciduous fang, through "*gestation*" to the hour of "*parturition*." We have abundant reason to assert, that these influences assist, or in other words are necessary to the full and healthy development of this foetal member of the dental circle, up to the very hour of "*parturition*" and the ushering into light of the pearly child.

Now, who told the good old nurse or anxious parent to send for the *accoucher* before the time, or who taught him when called to use the "FORCEPS" IN DELIVERY? His teacher in obstetrics certainly taught him the use of that instrument, but did he not advise him to give nature half a chance? and to use the "*instruments*" in abnormal developments only, and then with care?

REMOVAL OF THE DENTAL PULP AND FANG FILLING.

BY J. S. CLARK, D. D. S., NEW ORLEANS.

(Continued from page 18.)

WE shall pass over the operation of extirpation and filling that class of fangs in the incisor, canine and lower bicuspid, whose single fang presents but one simple canal, as with the aid of the instruments and manner of manipulating already described, they offer no difficulty not already noticed.

The lower molar offers about the same shape and difficulty as the one last described, (the upper bicuspid,) only that it is double, and both fangs generally present a bifurcated pulp, the front fang being generally the best defined of the two. But the upper molar offers still greater difficulties than either. The lingual fang pulp is as simple and as easily extirpated as any in the mouth, but usually the two labial fangs present great difficulties, and sometimes defy entrance to the apex. Here the posterior fang of the first molar and the anterior fang of the second molar are usually the best defined. In the removal of the pulp from both lower and upper molars, the first thing we attempt is the removal of that mass of pulp that fills the bifurcating foramen, and which connects with the two fangs of the lower or the three of the upper. In the upper molar (under consideration,) we attempt, after extirpating the pulp from the lingual fang, to cut so far down into the labial fangs, that with careful washing out and minute examination under a strong lens, we can plainly see the mouth of the separate canals into the fangs, and then with our finest broach attempt the operation, and even after half an hour's faithful attempt we acknowledge that we sometimes fail, and fill the lingual fang and only one or neither of the labial ones.

But in those cases they are very minute, and the cause of less apprehension than in larger developments. But it is an imperfection which we have always deplored. The dens sapientiæ are found in all shapes, from a clump of fangs all joined, to two, three and four fangs separate and distinct, and we leave them without further notice. The operation of extirpation and fang filling is one that no theory or description, however minute, can make so familiar to the reader as to enable him to perform it at once with dexterity. It requires practical demonstration, and it should be attempted with the full understanding that obstacles will be met with, which patience and careful perseverance alone will surmount. But when once surmounted they will form the practical

solutions ever after in subsequent attempts. In regard to the diseases to be met with and their treatment, we will offer a few suggestions in the spirit of this whole article, viz: they are the best known to us, and are their treatment the means by which we have been the most successful. We will, however, first say, that we feel very little hesitation in a pretty full confidence in this operation, if performed before ulceration, or when we remove a "live pulp," and we do not think one case in five hundred, if perfectly performed, will cause even ulceration to any annoying extent.

The first and most prominent disease that we encounter is, present suppuration or previous destruction and ulceration of the pulp, leaving the canal filled with a decomposed fungoid remnant of the pulp. The previous ulceration is always regarded as an unfortunate prognosis, but that is met with in, say, half the cases attempted. Our first operation is to remove, as perfectly as possible, all remnants of the pulp when we commence the treatment with creosote, and in the first application a small amount of arsenic.

We take a broach (thoroughly annealed) and wind around it to the point, cotton fibre, and having moistened it with creosote, insert it to near the apex of the fang or fangs, and then cut it off just within the cavity of the tooth, and let it remain at least for one day. We then attempt to pass a very small broach, spring temper (drawn to a blue,) through the foramen into the sac beyond; if this cannot be done, we continue treatment with creosote, but if the opening is free and the external opening through the alveolus is also free, we open that too, and by winding the mouth of a powerful syringe with a small tube, fit the tube into the mouth of the fang tight, and force the contents through the fang into the sac, and also the external opening through the alveolar and gum.

This can be done with facility in most of the teeth of single fang. The contents of the syringe may be, according to judgment, stimulant, escharotic or astringent.

A solution of nitrate of silver is our favorite in stubborn, indolent ulcers. Creosote and water for a more mild application, or sulphate of zinc in solution in still more milder forms. In most cases we succeed in healing up these issues, when we proceed to fill as described.

Chloride of zinc we use with good effect in those dry or putrid cases of entire destruction of the pulp. By the way, the idea of employing chloride of zinc was given to us by Dr. Blake, Professor of anatomy in the medical department of the St. Louis University, in 1847, and some years since, we mentioned in a note to Dr. James Taylor, of Cincinnati,

the fact, and stated our desire that the profession should try it as an escharotic, as we were far from a thorough knowledge of its exact action, and found it very variable in its effects. We are now using it, as first proposed by Dr. Blake, to arrest decomposition, and our impression now is, that its effects are very unlike arsenic.

Arsenic acts with certainty when placed in contact with a living surface, being absorbed in such a manner as to effect the whole pulp of a tooth, whereas chloride of zinc will not accomplish the death or paralyzation of a healthy pulp, but has more affinity for the decomposing surface or substance. But to return to the subject under consideration. One other difficulty encountered in the diseased pulp is, the frequent presence of small granulations of internal cementum, or something similar to it. In cutting away the internal cementum immediately over the bifurcating mass of pulp in the tooth of compound fangs, there seems to be, in many cases, a sort of abnormal formation of cementum in the shape of detached granulations of various shapes and sizes. We have found them as large as a No. 4 shot, and as small as a grain of sand. We took five pieces from the enlarged part of the pulp cavity of a tooth in the mouth of one of our brother dentists, some years since, in this city, and one caused us much trouble by its having been carelessly pushed up into the fang. These things, if not common, are, at least, often met with, and the same dentist, Dr. James S. Knapp, (alluded to above,) has informed me that he has encountered them in at least a dozen cases within the last month, the last of which was to-day, which specimens are preserved. The perfect ossification of the entire pulp is sometimes met with, the best specimen of which we have ever seen was taken from an upper cuspidati-shaped supernumary tooth, which we extracted from a Mr. Furber, of St. Louis, and which we enclosed to Dr. Solyman Brown, in 1840. This tooth we extracted in the presence of a physician, and wishing to examine the pulp, we cut off the crown with an excising forceps, and found no pulp but a perfectly ossified substance, exact in shape and conformation to the pulp cavity, and with a pair of tweezers we could remove it at will to the very point of the fang, it being about three-fourths of an inch long. A similar ossification was met with in 1845, in the lingual fang of an upper molar, and there is one fact in regard to both these cases that we wish to notice. Both of these teeth had been fractured by violence. The cuspidati by the forceps, in former attempts to extract it, had half of its crown broken off, and the molar had been broken in extracting its neighbor, the second molar, with too straight a forceps. The question might arise whether it was an extra effort of nature to shield the tooth on the

approach of danger, as in the case of teeth worn down to near the pulp cavity, or whether it was a disease. We leave others to examine this point, but will state that both of the gentlemen from whom these teeth were taken are since deceased from hereditarily acquired pulmonary disease.

HYPOCHONDRIASIS.

THERE is a striking analogy between our physical, intellectual, and moral development of morbid action. We shall not attempt to arrange our use of these terms according to nice physiological or philosophical connections or distinctions, but may use them in the popular sense, as distinct or separate exhibitions of the human organism.

Hypochondriasis has been considered by medical writers as a well defined phenomenon of morbid development, and they have described it as "characterized by disordered digestion, without fever or local lesion, flatulence, borborygnia, extreme increase of sensibility, palpitations, illusions of the senses, a succession of morbid feelings, which appear to simulate the greater part of the diseases, panics, exaggerated uneasiness of various kinds, chiefly in what regards the health, &c." This is undoubtedly a faithful and correct statement of symptoms; but diseases change in this diluting age, and diseases that formerly were rare and well marked have, by hereditary and other inductive means, become not only quite common, but, by a sort of affinity, joined to other morbid developments, until there is seen all the shades of similarity, from the well marked case to the mere trace of the particular distinguishing characteristic. Such we shall assume to be the case in regard to the disease under consideration. We will not stop to examine how much the physical organization, solely considered, has to do with the introduction and establishment of the disease, for the fact is undeniable that there can be neither sound mind nor body under its reign; but we propose to examine some of the causes of its modern prolific development. What, then, are the causes of this physical, mental and moral degeneracy, from its lightest shade to perfect monomania, or, we might say, *multi-mania*?

If we look back for, say, a quarter of a century, we find the whole country in the throes of universal excitement and change, in overtaxed and overstrained exertion in the legitimate as well as the ultra prosecution of Herculean enterprises. The squatter and pioneer found their farms turned into thriving towns, and the trapper on the watercourses, his shanty occupying valuable water lots.

The capitalist of the region of small coin grew dizzy in watching his twelve and a half cents double at compound interest, and raising the loan, invested it at fast rates, and lost it or made a fortune. The speculator, too, in moral sentiments or religious dogmas, found the sober, staid doctrines of the Fathers chime in too slowly with the innovations of the fast age; and so, whilst the staunch men, of iron constitutions and well balanced minds, became the founders of cities and the pioneers to new avenues of commerce, and the men of corresponding intellectual vigor and correct moral balance kept pace with the modern developments in science, literature, and religion, those of more depreciated constitutions and unbalanced minds could not withstand the shock, and lacking ballast, both mental and physical, they toppled over into the regions of imbecility, or lacking attraction, were thrown off in a tangent to the darker regions of decided aberration. These do not exhibit the phenomena of a few isolated sporadic cases, but the disease has become epidemic. The world is full of such cases. Society groans under the weight of their injuries; human nature totters at the inhalation of their pestilential breath. Commerce, in her great arterial pulsations, beats feebly to the touch of the maniac hand, while through the entire ramifications of national and social life there is a constant struggle with the incubus. It is not often an easy matter to decide as to endemic relations in all diseases, but a glance at the inductors will show, not only the direct cause of morbid action, but the abundant and ample preparation of the soil, (so to speak) for the seed. If we submit our physical systems to the vitiating influences of continued overtaking stimulants, we find an increased demand necessary to produce the same effects, advancing surely to the state of morbidity, until nature becomes inexorable in her vitiated demands, and finally lapses over into "delirium tremens," or "mania potu." Intemperance in anything will produce the same results, physically, in some degree. So with the mind in its physico-mental vitiation. If it is overstrained, overtaxed with the vitiating stimulants of unnatural excitement, the same results are attained, the same steadily increased demand presented to appease the vitiated senses, until nothing short of monstrosities will fill the disordered brain. Look at the history of the (modern) past. What stimulants, what excitements does it not present in the preparation for this great epidemic. And to what kind of minds have they been applied? Not to the contented farmer as he tilled the soil, satisfied to let the theologian occupy the place of religious teacher, the physician attend to the diseases incident to life. But farmer, mechanic, school-boy and nurse have become all at once philosophers, philanthropists, physicians, theo-

logians and prophets. These are the men who swallow the tons of patent medicines that inundate the land. These are the men who know all about diseases, will prescribe at or without sight for "all the ills that flesh is heir to," and can give you the sanitary condition of any place near or remote by a shrug, a grin, or a single sentence. These are the flatulents that fill our streets or thoroughfares with noise of pestilence, plague or death. Every internal pain is the cholera, every pustule the small pox, every death in the South of which they hear is the yellow fever. The world is one vast charnel house just within the reach, however, of resuscitation by the wonderful properties of the last nostrum which they have placed a week's faith in. These may be very clever, harmless people otherwise, and from that position wield the common tale-bearing influence. This is the milder form of the disease. But the world is full of moral hypochondriacs with the darker shades of monomania or multomania, whose minds having entered the great maelstrom of latter-day excitements have been unable to spread controlling canvass to the obedient wind, but have been drawn to the vortex and there they are, the giddy gyrating monuments of a single movement of idea, with their brains tied to a small circular streak around their culminating point.

No wonder that, as his eye flits by the white sail of the philosopher, as it moves to the touch of "gentle gales" near the distant peripheric circle, he should hold in contempt the tardy pace.

No wonder his brain swells by centripetal engorgement, and "seeing stars," he thinks he has found the short path to heaven's luminaries. As a dabbler in science, he is the discoverer of some philosopher's stone. In politics, he is the word-valiant warrior for the patriotic principles of a Benedict Arnold.

In morals and religion, he is the Aminadab Sleek of "very 'umble" shell to the propagandism of monstrosities, the sublimated devotee to the superhuman, the marvelous, the superstitious, in his (Galilean) swine-headed rush for the holy waters. He wants a pseudo christian chart for his new religion, and rejects the writings of Confucius, the Buddhist's creed and the Koran; there is too much philosophy and good sense in these heathen doctrines. His appetite can only be appeased by something more outrageously absurd, and he gluts over the more palatable ragouts of some of the modern "isms" and "alogies."

Who shall act as policeman to penetrate the dark recesses of social misery, and drag to light the wife murderer, the fratricide and matricide, or who shall write the history of the innocent child crucified to the elimination of a pseudo religious dogma?

What modern Howard shall collect the low mutterings from the engorged insane retracts, that tell the tales of mental suicide, with its entailment of social grief and broken hearts?

Who, in full view of the exodus to the "City of the Saints," or in sight of the prophecying malcontents, because the world wont burn to order, or looking at the lighter tints of fanatical shading-off to the point of civilization and sanity, can fail to discover the inductors to the great epidemic?

But we do not propose to catch one of the thousand reptiles that has flown through the "Camp," and hold up the isolated fang to view. But to point to the luminous form that God and nature have set up to view, in the shape of *simple unadorned truth*, that should be "seen and read of all men," and on which we may steadily "*look and live*."

THE LABORATORY VS. THE OPERATING ROOM.

A DIVORCE has often been proposed between what is called MECHANICAL DENTISTRY and OPERATIVE DENTAL SURGERY. There is no doubt that the mere mechanical construction of a piece of artificial work requires but the skill of a mere worker in gold—a man that can melt, refine, solder and polish with skill.

So in operative dentistry, a man of good mechanical genius and dexterity can be easily taught to put in a good substantial filling in any given cavity. Mere mechanical skill will do it, and do it well. We go farther, any good mechanic, with a moderate share of brains, can master the anatomy of limbs and extremities and easily be taught the use of instruments, so as to perform "*capital operations*" in surgery correctly and well. It is not a great feat to take up the well known severed artery. It is not a great feat to form a true surgeon's flap, or suture, or to saw off a bone; but is this surgery? Yes, if the simple performance of the operation is all that is required. But would that be (technically speaking) surgery? And that kind of prodigy be sought after in the hour of vibration between life and death? Surely, to know when to cut, where to cut, what to cut for, has something to do with surgery; and it is of just as much importance to the dental surgeon, whether he operates for diseased teeth, or when he has found it necessary to remove the natural ones, he supplies their place with artificial ones. These things are done for a reason, which reason is above the capacity of any mere mechanical dentist to fully understand.

Thousands of teeth are yearly sacrificed to such mechanical assump-

tion in all our cities, to say nothing of the country crop. Thousand more are sacrificed to *mere mechanical* attachments and operations, teeth too that are sound, or comparatively so, teeth that the dental surgeon could rescue for a life of service.

The truth is, that the highest attainment in dental surgery, and no inconsiderable experience in the development of disease and its remedies, are absolutely necessary to the correct adaptation of artificial dentures. We would no sooner trust the mechanical dentist of the laboratory to judge of, plan and execute a piece of artificial work, than we would the expert jeweler or goldsmith.

It is just as important that substantial dental knowledge and experience should direct the operation in what is called mechanical dentistry, as in operative dental surgery, and all the divorce we see possible, is in the mere process of construction. That, most of us of full practice do by proxy, or employ a dentist that we would trust with the full treatment of disease in our own mouth, or that of our friends; such would be our choice.

[Kindly furnished from the "Dental Register of the West," for July.]

PROCEEDINGS OF SOCIETIES.

MISSISSIPPI VALLEY ASSOCIATION OF DENTAL SURGEONS.

SPECIAL meeting held May 7th to receive the members of the American Society, pursuant to resolution adopted at the annual meeting.

Present Drs. TAFT, WATT, WEBSTER, GODDARD, HOW, TAYLOR, SMITH, McCULLOM, BROWN, BONSALE and LESLIE.

The President and Vice-President being absent, on motion of Dr. Goddard, Dr. Bonsale was called to the chair.

After transacting the regular business incident to the called session,

Dr. Goddard moved that in the absence of the president Dr. Taylor be appointed to welcome the American Society in the name of this association, and that Dr. Watt be a committee to invite said society to hold their sessions in this hall.

The members of the American Society being introduced, Dr. Taylor welcomed them to the West, and pledged a united effort to make their visit a pleasant one. When, on motion, the society adjourned.

AFTERNOON SESSION.

Committee on entertainment reported. Report accepted.

Adjourned.

At 9 o'clock, P. M.—The society met at the Walnut Street Hotel, where with the members of the American Society, together with a number of invited guests, Medical and Dental to the number of about fifty, they spent two hours pleasantly around the social board. In answer to toasts, speeches, short but pithy were made by Drs. Townsend,

Taylor, Dunning, Allen, Jobson and Millar of the dental profession, and by Professors Wood, Armor and Mendenhall of the Medical.

A very pleasant social evening was also enjoyed on the succeeding night at the hospitable board of our worthy ex-president, Dr. Charles Bonsall.

The members of the M. V. Association and others who enjoyed the society of their eastern brethren, will recall with pleasure their visit.

A. M. LESLIE, Sec'y.

From the Dental News Letter.

THE FIFTEENTH ANNUAL MEETING.

Of the American Society of Dental Surgeons, commenced according to Appointment, in the Hall of the Ohio Dental College, in the city of Cincinnati, Ohio, on Tuesday, May 8th, 1855.

Met at 10 o'clock A. M., the President in the chair.

Present Drs. Townsend, Dunning, Wheeler, Miller, Berry, Goddard, Taylor, Allen and Bonsall, together with many other members of the profession; several of them being members of the Mississippi Valley Association of Dental Surgeons, who had met for the purpose of welcoming this society.

In the absence of the Secretary, Dr. Bonsall was chosen Secretary *pro tem*.

At the morning session of the 11th, the President delivered the following address:

DR. TOWNSEND'S ADDRESS BEFORE THE AMERICAN SOCIETY OF DENTAL SURGEONS.

It is now fifteen years since the American Society of Dental Surgeons was organized, yet this is the first time that its members have assembled west of the Alleghany mountains.

The Atlantic slope has been heretofore most happy to extend its professional hospitality to the Mississippi Valley, and now at last it has the pleasure of enjoying the exchange of brotherly courtesies.

The reasons for this reciprocity have existed and have been felt and acknowledged long before the inconvenience of compliance could be well overcome, but I think, and may speak with the clearest assurance for my brethren of the East, that they have found a new happiness in thus meeting and greeting their friends of the West in their own home. They come to you in a spirit that matches fully the welcome you give them. I cannot in justice say less, and I cannot possibly say more for the sentiment with which the brotherhood of the Atlantic this day greets that of the Mississippi.

But there is something more than equality of courtesy in exchange; there is a clear claim of right in it.

The dentistry of the West has honorably earned such fair recognition of its claims. The Star of Science, like the Star of empire, westward holds its way, and the centre of influence is rapidly traveling toward the centre of territory.

I will not undertake to settle the west longitude of Cincinnati from the site of the professional observatory, but, however far it was behind time in the morning of our day, it seems to me that its meridian has

rolled itself fairly into the noontide, and that the whole difference of time is lost in the equality of light in which it now stands. I see nothing of the shadow of the Allegheny upon the science of the great valley, nor do the rays of your sun seem to slant any more than they do "down east."

But you are doubtless comfortable enough in the consciousness of your position without the help of our concessions, and it is only because you are justly entitled to a frank acknowledgment that we make it. You are none the richer that you receive your due, but we would be thus much poorer if we withheld it.

The distance of time and place which we, who were earliest in this movement, realize to-day by its contrast with that beginning of professional association, presses upon us the feeling of many another change which we cannot wholly silence until it has had some sort of utterance. The time, the place, the circumstances are apt for a brief retrospect, and they are full of suggestiveness for the purposes of the present assemblage.

Fifteen years ago there were not more than 1200 practitioners of dentistry in the Union. The United States census for 1850 reports 2923, and the five years since elapsed have added perhaps 200 annually—bringing the number up to 4000. One dentist for every six thousand of the population of the Union. In 1840 there was but one dentist for every 15,000 of the inhabitants. But this numerical increase of three to one must be multiplied three times at least, fairly to render the amount of the demand for the services of the profession. By this estimate dentistry has risen at least nine fold in public and popular requirement and consideration during the little life time of this society.

This growth in mere bulk and weight indicates a lusty youth, and promises magnificent proportions for that full manhood of the profession on which it is rapidly entering. But what shall we say of its scientific and artistic development during this period?

The men who best knew it then and now, would most feel the difficulty of adequately answering the question. The changes are in fact too great to be measured and reported in all their fullness and value.

Contemporary history is always difficult and sometimes dangerous. Exactness in statement and justice in judgment are scarcely attainable of things passing with ordinary rapidity through one's personal experience, but this history has had the rush of revolution added to the speed of natural progress.

If the analogy to a human life might be borrowed, we would be justified in saying that our profession 15 years ago had just worried through its infancy. Since then its growth in all things has been that upon which the boy enters at the period of his puberty, a period of manhood in all its faculties and functions, wanting only the discipline of time and experience to strengthen his energies. At the beginning of this period there came into existence the first dental college in this country and the world—now we have two others, the Ohio and Philadelphia Colleges.

Our periodicals also fall within this date, and one of them has 2500 subscribers. Facts like these are exceedingly brief in their statement, but they index volumes of progress, and register incalculable achieve-

ments. To my mind, however, there is no more striking indication of advancement than in the altered tone of the journalism and societary addresses which a comparison of the two periods discover. Then the burden of every appeal was the prevalent charlatanism that infested the profession. Now the the educators, the professional authors, and the orators of our meetings have almost forgotten to confess and deplore the degradation of our calling.

It has passed away to such an extent that we are occupied with that kind of self improvement which implies no stinging professional reproach, but rather proves its healthful soundness. Twenty-five years ago not one in five of the practitioners of our art had attained much practical excellence—the exposure of a general incompetency lay in the mouth of almost every man we met; now, how seldom do we meet the old-time deformities of quackery and ignorance, and how generally good is the work that comes from all quarters of the country under the casual inspection of our most accomplished professors. I need not compare the porcelain and plate work, with the sea horse and blacksmithing of their respective periods which we are speaking of; I need not compare the surgery proper of the mouth and antra which has passed into the hands of the profession from those of the sister branches of Medicine. I need not insist upon the admirable control of irregularities, and the perfection of skill and material with which disease is now curatively treated, and the respectful confidence with which the popular experience has rewarded us. I need not insist that the medical faculty has recognized our fraternal rank in the general healing art. I need not point to the standard elementary books which have grown into a library upon our shelves. I comprehend all this progress, and express the compass of all this attainment, by saying that we have reached the high point of respecting ourselves. The very preamble of our constitution in which the necessity “to *give* character and *respectability* to the profession, by establishing a line of distinction between the truly meritorious and skillful, and such as riot in the ill-gotten fruit of unblushing impudence and empiricism,” has grown obsolete by its own successes. Even the Constitution of the Mississippi Valley Association founded as lately as 1844 expressed the distressed anxiety to elevate the character and standing of our profession, and make it worthy the confidence of an enlightened public. The brief period of fifteen years in the one case and the still briefer period of 10 years in the other have so altered the consciousness of the earnest men of those days that they would scarcely think of admitting such mortifying necessities into the programme of an organization to be set on foot for the profession now.

Happily, the great majority of dental practitioners now before the American people have attained an average competency and character, and have acquired courage and confidence enough to assert for themselves the claims of a liberal profession, and are so well relieved of the taint and suspicion of quackery themselves that they can bear the contact of mediocrity, as well and as safely as the faculties of law, medicine and divinity sustain their respective proportion of discredit for the same cause.

Even in the matter of provision for the classical education of our

pupils we compare with the professions of a century's growth in this country, so well that we may proudly challenge a just comparison. The 40,564 practitioners of medicine sustain 36 colleges, or one school to every 1127 members. 23,939 lawyers have 16 schools, an average of one to 1495 members of the bar. Our three dental colleges bear the intermediate ratio of one to every 1333 practitioners. Thus stands the *preparation* that we have made for the systematic education of our profession on a fairly proportioned level with the highest.

The average of results is of course as yet below the standard before us. The students at the medical schools of 1850 were as one to eight of the practising physicians. The law students, one to forty-five. Ours is perhaps as one to forty, or five times less than the proportion which we would sustain to those of the sister healing art. But our oldest college is of no more than fifteen years standing, the next of ten, and the youngest but three, while collegiate education in general medicine counts to a full century of opportunity for its achievement among us. Give us but ten years more for our trial, and we will outrank them by every test that can determine the pretensions of a profession to the honors of a liberal competition. Ten years will put dentistry at par with medicine in its educational method and success, but without invidiousness we are well warranted in claiming a greater exception from quackery within our ranks to-day than they are compelled to acknowledge.

The principles of dentistry are better settled, its practise is better justified, its progress is more certain and rapid now than physic can with any show of truth pretend to.

If it be retorted that we are responsible for so much less; that our entire province covers but one branch of remedial practice, although it in truth involves every branch of medical science, we may answer that not one of the several branches which the parent stock bears has been cultivated into an equal perfection with that one which we have severed from the stem and cultivated with an exclusive care.

But we may fairly claim something more than the faithful and successful husbandry of our own field of scientific truth; we have developed and demonstrated the method and system by which general medicine is yet to be improved, and our example will in good time compel it into conformity. After our plan of individualizing one distinct branch of remedial art, and making all the others justly subsidiary and subordinate to it, medicine will ere long be divided into surgery, therapeutics and obstetrics, at least. Separate colleges will be assigned to each, with an entire faculty of professors, limited in their teaching and controlled in their drift, by the demands of the particular department which the pupil is destined to practice in after life.

In that day of sounder philosophy in theory and better allotment of functions, Doctor of Dentistry will stand as the pioneer and historic type of the fully instructed Doctor of Physic, Doctor of Surgery, and Doctor of Obstetrics. The memory of our quackery will be forgotten as a fault inevitable to our extreme infancy, and the parent profession will be purged of its own, which in truth is a vice of its constitution, not an accident of its infancy but ripening with its growth into disease

that nothing but such reformation as our policy prescribes can effectually remedy.

Thus already both in achievements actually secured, and in prospects as certainly within our immediate reach, we stand in a position, "looking before and after," that may well justify a generous pride, and inspire a courageous confidence. Our observation, to use a nautical expression, satisfies us that we have been sailing on the high sea of adventure in the right direction, our bearings are all right, our distances show fine speed, and our voyage is all fair sailing before us.

Of one of the instrumentalities availably employed for our advancement, hitherto I have said nothing, I have reserved it because it is that which most especially falls within the functions of the present assemblage, and because it asks a stricter criticism than those other agencies which are working something better for our uses; I mean the voluntary association of the established practitioners of Dentistry throughout the Union, for such purposes as it can be best made to serve.

The American Society was organized, like the Constitutions of the older States, in the midst of a revolutionary struggle. It had in it the best wisdom, and looked to the worthiest objects, that the light of that day afforded, and the wants then urgent demanded. The roll of its first members is the record of the profession's best and worthiest men. They did their work with pure hearts, fervently, and noble fruits have been harvested of their right hand planting; they have ripened richly for our use, and it is for us to replant them now in a larger field.

The changes that have passed upon the condition of the profession since its institution, in the nature of things, demand correspondent changes in its structure. It bears the name of American, but it is not in any tolerable degree national. It is no longer, as at first, representative of the full force, as well as the best spirit, of the fraternity. A number of names so small as it now embraces, might be enough and more than enough for the highest service in the *cultivation* of any science. In authorship and in professional teaching a score or two of able men might be sufficient for a country and an age, but the purpose of a national society is necessarily the aggregation, or at least the thorough representation of the entire fraternity, in one organic movement. I venture the assertion that the proper and principal qualification of a National, or State, or County, society of professional men engaged in practice, is even more a question of numbers than of standing and talent, provided only that standing and talent are embraced within the number.

The exclusion, and exposure, of quackery was the exigency of those days, and numbers was a consideration secondary to all other objects of association. The sifting process was severely and successfully employed; pledges against modes of practice, held to be irregular and open to great abuses, were exacted; practitioners in good standing were subjected to a formal examination by committees of their equals, as a condition of admission to the society; and in the ardent zeal of the day for purity of doctrine, even the liberty of opinion, and the right of difference, in practice were somewhat abridged. The strifes resulting, bred wars within, as well as without, the camp of the faithful, and the con-

sequence has been a narrowing of the membership in proportion to the rigidity of its discipline.

The society did its work, but it is not also obvious that it has almost lost its capacity for the work that is before it? The Apostles of the New Testament Dispensation think so of the Prophets of the Old, and it is the one lesson which history teaches of most practical value to men, that the men of new times must be allowed to organize the institutions and administer the affairs of their own day.

My motives, I am conscious, need no concealment, my personal position and involvements must acquit me of all suspicion of irreverence and ingratitude to the past, to my own compatriots, and to my fellow laborers. My meaning is, therefore, frankly avowed: speaking for myself, and reflecting the sentiments of a large number of the men whose judgment I profoundly respect, I aim at the regeneration, the rejuvenation of the American society, by such adjustment to the present condition of things as may happily make it as truly broad and national in spirit and action, as it is in name and design. Its position in the profession should be changed from exclusiveness to inclusiveness. It should be made comprehensive and representative of the whole professional talent of the nation. It cannot answer the best and broadest of its aims in any other way.

I do not think that a national society of educated men must necessarily be a synod of savans, an aristocracy of talent, a first estate in the realm of science, but, that it bases itself really upon a conceded republican equality of rights and duties; and ought to be democratically representative. Let the profession as it is, liberally embracing all that is fairly professional within it, in fact be fully recognized, and let the common interest take the case of the common weal. Association of superiority with mediocrity can work no injury to the common interest of reputation, but must be productive of improvement every way. The profession abstractly has a character which is no longer endangered by the unworthiness of pretenders. Admission to membership on open even conditions is no endorsement of the standing of individuals, and works no responsibility of the whole for its parts. The common right of election held by all societies is protective enough of all that concerns the association, and the respectful deference of such an acknowledged equality will secure the support and services of the whole body of the great brotherhood.

No member of this society holds that its certificate is the sole evidence of respectability. He does not govern his own etiquette by any such test, and why should he insist upon it as a condition of association in society, any more than in his daily practice? The whole argument may be made to fall fully within a clear statement of it, which I would put in this form: Is it the business of respectable dentists now to purify the profession, or to improve it—to purge, or to diet and strengthen it—to administer alteratives or tonics—to salivate the convalescent patient, or to prescribe wholesome nourishment and regenerating exercise?

Let us, my brethren, drop the notion that we have our own respectability to care for. It will care for itself, if it needs any; and let us take up that other idea, that our relations to our brethren now demand a frank devotion to their interests, and the general advancement of our

calling. Let us turn reverently to our predecessors and our compatriots of the earlier day, and render them the homage due for a wise, brave, and successful championship of our honored calling, and pledge ourselves to as ardent, as devoted, and as worthy an effort to serve the enlarged interests which we have and hold now by inheritance from them.

The essential aims of our association are well expressed in the preamble to the Constitution: "The objects of this society are to promote union and harmony among *all* respectable and well-informed Dental Surgeons; to advance the science by free communication and interchange of sentiments, either verbal or written, between the members, both in this and other countries." The Mississippi Valley Association in different terms expresses the same intention. "We deem it expedient to form an Association, for purposes of mutual improvement in the science and practice of our profession, to promote the exercise of that gentlemanly courtesy which should characterize members of liberal professions in both social and professional intercourse; believing also that by frequent interchange of opinion and observation in practice, by reporting from time to time cases of interest as they occur in individual practice, we may do much to elevate the character, &c."

The American Society of Physicians and Surgeons, and a long list of associations among the cultivators of liberal learning and arts, assign similar objects for similar organizations. The members of the learned professions who feel the necessity of a forward movement, and the friends of general education, are all using the method of such personal conference, discussion and oral communication, on a clear perception of its special advantages and of its remunerating value in the service of professional interest and general learning.

It is not necessary to detail these advantages, or to dilate upon the utility of organizations among professional adepts; they are too well understood, too well warranted by experience, and, they are not disputed. I allude to them only to invoke their proper force in urging the endeavor to make our society answer all the ends of which in the nature of things it is capable; and I submit to the best judgment of its members their duty of adopting whatever measures may seem to them necessary and best adapted to put it abreast of the times.

How shall we make its actual agency co-extensive with its avowed objects, is the question; and our duty to the profession requires that we solve this question and resolve upon the expedient. I doubt not that this assemblage is competent to the devising of some proceedings which will early and happily answer the question.

On motion of Dr. Taylor a committee of three was appointed to take into consideration, the suggestion made in the President's address; and Drs. Taylor, Dunning and Goddard were appointed and directed to report at the next session.

To the American Society, &c.

Your committee to whom was referred the President's address, would respectfully report:

That they have especially turned their attention to that part of the address which suggests a more liberal—less exclusive, and more national organization: one which shall bring up at our yearly convocations a fair representation from every portion of our extended country.

The committee feel that the profession occupies now a very different position from that which it did when this society was first organized.

That however admirably adapted the organization was then for the work assigned it, yet having accomplished, as we believe, that work, had been of vast service to the profession—a broader basis for action is now demanded.

The Society was organized before we had a dental literature or any effective and well organized system of dental education. In the brief period of its existence, the work of a century has been accomplished, and the impetus, which has wrought such progress, demands a new set of machinery, that we may keep pace with the active spirit of the age.

The committee would therefore recommend that a call be issued by the President of this society, in accordance with the sixth article of the Constitution, "to take into consideration the general subject of associations, and the dissolution of this society; said meeting to be held in Philadelphia, on the day previous to the holding of the meeting called by a number of dentists of that city."

JAMES TAYLOR,	} Committee.
E. J. DUNNING,	
WM. H. GODDARD,	

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL—EDITED BY BENNETT DOWLER, M. D., AND PUBLISHED BY H. McCULLOCH, 76 CAMP ST
144 pp.

WE have received the July No. of this valuable and ably conducted Journal.

It gives us pleasure to record here, a thought that recurs with every issue of this work, which is, that New Orleans, indeed, the whole South, have reason to feel proud of her men in the different departments of medical practice and science. Without presuming to criticise as to the particular phases which the investigations in medical science may from time to time present in the shape of theories, we are free to say, that in the Periodical Literature of the Profession, the editor of the N. O. Med. and Surgical Journal has but few compeers. There is a vigor and clearness of perception of the very anatomy (so to speak) of the subjects treated, that can only arise from an intimate knowledge of the subject handled, joined to a full and heartfelt confidence in the elimination of truth. Terseness comes intuitive to such writers, for a man handling (truths) those gems of Philosophy, feels that they need no tinsel setting, and he holds them up with a full confidence that the quality will be at once recognised by all who have judgment enough to tell the difference between "paste" and a "gem of the first water."

In this (July) No. we find inserted an article from the Br. and For,

Med. Chir. Rev. for April, which we had clipped for insertion from that work, extracts from which we present as follows :

HIGHLY INTERESTING TO DENTISTS.

Discovery of a new mode of producing anæsthesia, by ALEXANDER FLEMING, M. D. Professor of Materia Medica, Queens College, Cork, by compression of the earotids.

The mode of operating is "to place the thumb of each hand under the angle of the lower jaw and feeling the artery, to press backward and obstruct the circulation through it. The recumbent position is the best, and the head of the patient should lie a little forward, to relax the skin. There should be no pressure on the windpipe." * * * *
 "There is felt a soft humming in the ears, a sense of tingling steals over the body, and in a few seconds complete unconsciousness and insensibility supervene, and continue as long as the pressure is maintained. On its removal there is confusion of thought, with a return of the tingling sensation, and in a few seconds consciousness is restored. The operation pales the face slightly, but the pulse is little if any at all affected. In profound sleep the breathing is stertorous, but otherwise free.

The experiments have never caused nausea, sickness, or any other unpleasant symptom, except in a few instances slight languor. The period of profound sleep in my experiments have seldom exceeded fifteen seconds, never half a minute."

We have tried this as directed above, and have succeeded in producing entire somnolence at least, and have good reason to suppose anæsthesia, for we have performed several small but painful operations under its influence with the same indications of its being painless, as is shown under the inhalation of ether or chloroform. The Profession will doubtless soon test its value and give us results, and we refrain from further remarks, hoping in the next No. of the Obturator to have a collection of interesting facts to record.

We are indebted to the Editors of the DENTAL NEWS LETTER and the DENTAL REGISTER, for proof sheets, (in advance of publication) for the report of proceedings of the MISSISSIPPI VALLEY DENTAL ASSOCIATION, and the AMERICAN SOCIETY OF DENTAL SURGEONS, for which we return our sincere thanks. The report of proceedings we have been compelled to cut short, owing to the forward state of this number, on reception of the above, (all but the last form being in type) and our anxiety to publish entire the interesting and able address of DR. TOWNSEND contained in the proof.

THE DENTAL OBTURATOR.

VOL. I.]

NOVEMBER, 1855.

[NO. III.]

OBTURATOR CHIPS, No 2.

In 1839 and '40, there came into existence the first Dental Periodical, the first Dental College, and the first National Society of Dentists, not only of this country, but of the world, viz: the "AMERICAN JOURNAL OF DENTAL SCIENCE;"—"THE BALTIMORE COLLEGE OF DENTAL SCIENCE, and the "AMERICAN SOCIETY OF DENTAL SURGEONS."

These three pioneers in the science and literature of the Profession were ushered into existence by those who felt that there was a GREAT WORK to which they were ready to lend willing hands and earnest hearts, and success followed them.

How could it be otherwise, when men held such sentiments as these.

Dr. Hayden, the venerable "*Father of this Society*," said, at the Convention which adopted the Constitution, "For myself, I cannot brook defeat in this favorite undertaking. * * * Let us, therefore, go forward in the good cause, untimidated by the skepticism of the faithless, the fears of the timid, or the apathy of the selfish. If there are some who prefer to plod on in the path of private enterprise, let us unite our efforts in the grand social endeavor to elevate our Profession from the degraded condition to which it has sunk, and in which it must ever remain until the high-minded and well-educated amongst its practitioners shall unitedly arise and shake themselves from the dust."

Dr. Eleazar Parmly also said, "I feel myself happy in being of the number of those whose names shall be transmitted, in the act which we have just performed, to the latest posterity, and whose memories will live in the history of our Profession long after our mortal remains shall have been gathered to the home of our Fathers. * * *

"Personal fame and aggrandizement should never be allowed to constitute predominant ingredients in the composition of our professional ambition. Nobler motives shall animate our zeal while engaged in laying the corner stone of a structure, which, completed by our successors shall at some future day command the respect, if not the admiration of the world. * * * It will be to each of us a fresh stimulus to exertion, that the failure of our plans is not only confident-

ly predicted, but ardently desired by many whose professional ambition knows no impulse beyond a thirst for gold."

Such is the history of nearly all self-sacrificing enterprises that have ever warmed the human heart, and led men to act in conjunction in any great and good cause. We have but to cast our eyes over the entire field of human progress to discover that in all the entire ramifications of society if we follow back any of the great schemes of benevolence that have gladdened and enriched the heart and expanded the intellect by combined ministrations, we cannot doubt that they had their origin in good impulses. But there comes a point in all human institutions, where under accumulated power, (which always corrupting) poor recreant human nature stays the hand that was put forth for the public weal, and claims its labor for sinister ends and the CRUSADE OF OPINION.

Such an origin and such changes have marked the history of the American Society. Its first fruits were good. But a little farther on we find it attempting the assumption of law-giver and conscience-keeper for the Profession. Of course, a conflict ensued.* A conflict between manhood's inherent rights and an assumed conservatism. In this unequal contest the liliputian style of warfare was truly ludicrous. As ludicrous as would be the tiny shield and spear against the death-dealing engines of modern warfare. It was the contest of PROGRESS with STATU QUO-ISM.

The race of TIME with a STOPPING CLOCK. The attempt to stay the waves of OCEAN by a MARK UPON THE SAND.

The grasping of a handful of BOND-STREET WIND as a sample of the generous GALES THAT FAN THE WORLD.

But to return to the history. A few years since, (an age in the cycle of progress) some in the Profession attempted re-juvenation, and judging they could cure its imbecility therapeutically, they went to work on its constitution by alteratives and stimulants and ample doses, compounded with great care by able Pharmaceutists, were administered. There were symptoms of re-cuperation, but the ever-anxious conservators, fearing the pulse would rise too high, also administered large sedative doses, until with a few fitful pulsations between stimulant and sedative, it is lingering out a miserable existence in the Hospital, and might give the same experience as one of its other inmates, who said "he was shot through his heart with a pistol, when, in escaping from its murderer, he jumped out the third story window and

* NOTE.—We come to this question with clean hands, containing no mercurial deposit or amalgamation of interest with practice that needs plastic material.

broke his neck, and a carriage going by, ran over him and broke his leg, and he was in a bad way intirely."

The old society was *ruled* to death, was killed in battle, was legislated to death, and now is suffering under over-doses of medicine, and the very men who administered the sedatives say it has a bad breath.

We hope these gentlemen will examine this case with a view of making a careful diagnosis, for we desire to make further report in a few months, and if death does ensue, we have luminous chapters that we wish to read at the bed-side, culled from its archives.

WHAT IS SCIENCE? AND WHAT CLAIM HAS DENTAL SURGERY TO BE CALLED A SCIENCE?

In popular acceptation and in a literal sense, the word has two meanings.

In a popular sense it has kept company with its sonorous friends, the captains, colonels and generals, until it has become the patron saint of the prize-fighters, barbers and shoe-blacks, and any thing may be thus *degraded* by the name of science that shall partake in the least of uniform development, under an obedience to the common laws under which man exists. As this is the age of license, and as it requires but an assertion and an outline, given from the regions of fancy to *create* new systems of philosophy, and all in this age have become philosopher, men and women. So we shall attempt to give, at least, an outline of (our understanding of) the term SCIENCE.

God, the Creator, is its author. His works form a perfect, uniform, certain, unchangeable chain or circle of scientific development.

To us the phenomena exhibited in any particular department of the material universe will partake of this certainty, this uniformity, just in proportion to the ascertaining of those laws, and to our minds or in our hands form "*knowledge, certainty, grounded on demonstration, Art attained by precept, or built on principles,*" called by us SCIENCE. From its very nature, then, any particular science is perfect or imperfect in proportion to its demonstration of the great truths, in fact, emanating from this Divine source. No science is or ever can be perfect, inasmuch as finite cannot fathom the infinite.

Take, for instance, the science of theology. It is the attempt to arrange in a perfect system the "attributes of God, His relation to

man," &c. Can it be done? Will it ever be unfolded to human view? Again, take chemistry. The hand of Omnipotence arranged the particles of matter, bearing certain uniform relations to each other. We ascertain some of those relations or laws, but can finite man bring to the laboratory the full exposition and demonstration of those laws? Will he be able to mark the flitting changes that, unseen, keep the world of earth, air and water in equilibrium?

Chemistry is a science where "*art has built by precept or principles,*" and so with all sciences; it is the ascertaining of laws in relation to any subject that are proved to be emanations from the great source of all unchangeable law. They are the children of one common Parent, and they can prove their birthright to the name in only one way, which is the production of phenomena coincident to these laws, when applied to our uses.

It is not for us to settle the question as to where, in the thousand occupations of man, the term science shall be applied, and when it becomes a misnomer; but we do suppose that it can be rightly applied to the works of the LEARNED INVESTIGATOR, and that it is only to be applied to the labors of a LEARNED PROFESSION, who combine enough in the application to prove that it is on the application of these (*to the mass occult truths*) that he rests his chance of success.

A boy picks up a pebble and hurls it into the ocean. A geologist also takes one, and by the light of what is called the science of geology, he reads the history of ages. We call him the man of science. Shall we also say that the boy is master of the science of throwing stones? Yet it flies on the application of certain laws, falls by certain law, and the geologist only acts in accordance with certain laws, but the one acts in accordance with common and familiar, almost intuitive teaching, while the other is the learned explorer in the regions of occult truths, and has brought out from the great store-house things that have been procured only by intellectual research of a high order, and hence we speak of his calling as a profession, his system a science.

The practice of Dentistry rests its claims on precisely the same grounds. that of having pushed its investigations in anatomy, physiology, therapeutics, chemistry and metalurgy to the point of the establishment of a system of dental surgery in some good degree coincident to the great laws that form that GREAT CIRCLE of perfection.

This, then, is the high court of enquiry and investigation in which we practice. These the principles on which we build; and can we sit down satisfied that we "know it all?" With this view and these ideas of our noble calling, we traverse the world as explorers for the

enriching of our profession, and humbly woo the gentle goddess of science, satisfied to learn by her teachings. Without it we practice a trade, satisfied to produce wares that merely pass on "change" with credulous purchasers. With it we hail with joy the scintillations of genius, and take by the hand any who add to the store, and call him friend who ministers the most successfully to the wants of suffering humanity. Without it we shrink within ourselves, and treat as invaders those who dare to innovate our beaten track. The one sets up in his mind the model of perfection, soaring far above our mortal ken, and strives to find the path, with a constant longing for new avenues to its glories. The other thinks the acme already reached, and says the world is right in judging that the fountain has no higher point than his small artesian perforation indicates. The one claims for his profession, as connected with science, the patent of nobility. The other flaunts the imitation of the "*order*" from his highest button-hole.

THE DENTAL CONVENTION,

AT PHILADELPHIA, AUGUST 2, 1855.

Before laying before our readers a partial report of this Convention, we have a word to say in regard to it.

At the outset then, this is not the American Society, has not, never had any connection with it whatever, more than the fact that some were members of both bodies that met at the same City and within one day of the same time. Members of the American Society it is true, had, in view of the inability of the Society to reach the mass of practitioners, proposed that the American Society be dissolved, and that the Convention be held. Dr. E. Townsend, the President of the American Society, in his address before that body (in May, at Cincinnati,) alluded to the state of things in the Society, and offered suggestions in regard to the want of something more in accordance with the spirit of the age and wants of the profession, and heartily joined the effort to bring the Convention together, but the resolution to dissolve the Society came from the Society, and not from him. How and why the first meeting happened to be at Philadelphia will be at once seen by attention to the fact that some sixty Dentists at Philadelphia and adjacent places, united in the call, and tendered hospitalities. In simple truth, because no other city would do it.

This brings us to a most gratifying record of one of the pleasantest reminiscences of our whole Professional career, that of associating

with so many gentlemen, laboring side by side with the utmost harmony and oneness of aim, that of enriching and ennobling the Profession. We do not fear the accusation of individousness when we say that we recognised an unusual degree of gentlemanly deportment between the different practitioners of Dentistry in their associations with each other, and an absence of those *ear-blistering innuendos* that so degrade men, and insult refined sensibilities.

BUT THE CONVENTION.—Its designs are to bring together the Dentists from all parts of the country, that somebody may be benefitted. If A. B. and C. are better Dentists than D. E. and F., the latter will probably be the most benefitted, but the former may gain something from the latter.

We want to meet THE MEN that actually perform the operations consuming the four thousand ounces of gold foil annually, costing over a million of dollars. We want to compare notes with them. Those who impart will not be impoverished, those who receive will gain that which they will learn in no other way. The whole plan of the Convention then is, to call up every year, those men who do the work, to make a contribution to the general stock of facts and experiences, and this is all that is asked. It is not designed to be the arena for the contest of opinion, but a point of deposit for valuable facts from which all can receive a dividend.

As will be seen by the Articles of Association, the organization is simple and effective, leaving little margin for legislation, and giving to each meeting of the body the entire control of interests, choice of officers, &c.

For instance, the Convention has met at Philadelphia, and all there is left of executive organization, is just enough to re-organize next August in New-York, when the present offices are vacated and new officers chosen to act for that session, and they will be just such men as it is the pleasure of the Convention to choose. In a word, it is the true republican form of organization, and as such, can be made any thing that the true republican spirit treading the halls of science and art choose to make it.

Are those fearful souls too good for earthly contact with those hideous monsters, with those who presume to call themselves Dentists, when it is well known that they are not only of mere mediocre talent, but of lax morals in their pretended practice of Dental Surgery ! Such monsters will undoubtedly be found there, and all such paragons as fear the contact had better stay at home. It will never do for them to risk it. They ought never to ride in an omnibus, rail-car or steamer.—

They ought never to identify themselves with any church, or benevolent association, and as for political combinations, their motto should be, "*procul o procul este profanis.*"

Such rare gems of human perfection ought to be set like the delicate rose diamond, borrowing reflected light from its artistic setting, but never to be examined on both sides, one being *flat* and generally set in black paste or foil, never be seen to advantage away from such setting. And then its name indicates beauty, fragrance, tenderness. But your true diamond, your brilliant, is not formed with one-half *flat*—is always set open, and has no vulnerable points for the light or the eye, but sends back its beautiful prismatic rays from all points. One has thin edges that are easily fractured by rough contact, but your brilliant has all points perfectly impregnable against injury from contact with the hardest substances, while the very attrition of contact keeps it bright.

Daily ablution too keeps it bright and pure, but not so with the rose and setting, it may be tickled with a feathery brush to advantage, to clean its face slightly and tenderly, but actual ablution and immersion will tarnish its (*base*) reflector. But both do shine, must shine, they cannot help shining. In fact, both being diamonds, they are slightly willing to shine.

Now we do really suppose that there are many Professional gems that will not consent at once to that "open work" kind of a setting (the National Convention). To such we cordially recommend the American Society, for that can be made as exclusive and conservative as they choose, and has the advantage of its having its backing amply supplied with "paste and foil," that will show through (with brilliant effect) any transparent substance placed in the foreground.

It matters little in what kind of a harness a horse draws, so he will only *draw*. So in the work of progress in our Profession, it matters less what the particular combination is called or how it is combined, than it does the simple fact whether men are really in earnest when they talk about these things, and really desire to work for the enriching and ennobling of the Profession.

If men really feel that there is work to be done and they are really anxious to (help) do it, any combination will offer a rich field in which they can labor with good results. Men that have the heart and soul of men, and are willing to sacrifice a little of self can do anything that they set their hands to do. Such men opened the new world, demonstrated the principles of freedom and self-government, unlocked

the arcana of the sciences, and chained nature's grandest, wildest phenomena to the car of human progress.

Such ARE the MEN of the Nineteenth Century. But there always have been, doubting, temporising critics who could always find excuse enough for their *drone-ship* in the fact that there was nothing in all these enterprises that exactly suited them. Poor, doubting souls that fear and question the propriety of their contact with anything short of perfection. So enamored with their own little taper-light, that they imagine that they light the world, and think the world is bound to be only just as light as they are pleased to let it, but the broad-day sun-light will soon hide their blinking white-eyed flame, and they will stand alone in their glory.

They might as well hold a lighted candle for sunrise. But the sun of sense is rising, and will rise higher and higher, and the most singular phenomena of all is to see these same men come forward as the anxious fathers of every increasing genial ray, just like the Shanghai that crowed the other morning, and when the sun rose hailed it as his achievement. *It rose because he crowed.*

But to the report :

PROCEEDINGS OF THE AMERICAN SOCIETY OF DENTAL SURGEONS.

Pursuant to a resolution of the meeting held in Cincinnati, May 8th, 1855, the Society met in Philadelphia, August 1st, 1855, at the rooms of the Philadelphia Dental College.

Members present—Drs. Townsend, Bonsall, Arthur, Dunning, D. R. Parmly, John Allen, S. P. Miller, Goddard, J. S. Clark, and Cone. The President, Dr. Townsend in the Chair, and Dr. Bonsall, Sec'y. The minutes of the previous meeting were read and approved.

The object of the meeting—"to take into consideration the general subject of Associations and the dissolution of this Society"—now came up for discussion, and was spoken to by Drs. Arthur, Dunning, Townsend, Goddard, Clark, Miller and Cone.

Dr. Goddard moved a reference of the subject to a committee, which, after some further discussion, was adopted and a committee appointed, with instructions to report at 5 o'clock, P. M.

The meeting then adjourned until 4½ o'clock.

At 4½ o'clock the Society again convened, and heard the following report :

Your committee, to whom was referred the subject of the propriety of dissolving this Association, after mature deliberation, think it inexpedient to dissolve the Society at present, and ask of the Society leave to report at the next annual meeting, in 1856.

E. TOWNSEND,	R. ARTHUR,	} Committee.
E. J. DUNNING,	JNO. S. CLARK,	
C. O. CONE,		

After considerable discussion on the report of the committee, the report was accepted and leave granted.

On motion of Dr. Goddard, it was

Resolved, That the above committee be, and they are hereby instructed, in case they consider it necessary for the further advancement of the Society, so to amend the Constitution and By-Laws of the Society, as to alter the sum to be paid for initiation and annual dues, as will best comport with the welfare of this Association, and do all other things necessary in the premises, so as to perpetuate and place this Society upon a permanent basis, and such as will suit the views of the profession generally.

The above resolution was carried almost unanimously, after which, in consideration of the Society having already held two meetings during the present year, the annual meeting for the present year was dispensed with, and the Society decided that when they adjourned it should be to meet at the Astor House, in the city of New-York, on the first Tuesday of August, 1856, at 10 o'clock, A. M.

Adjourned, *sine die*.

J. R. M'C.—*News Letter*.

REPORT OF THE ORGANIZATION AND PROCEEDINGS OF THE FIRST MEETING OF THE "AMERICAN DENTAL CONVENTION," HELD IN PHILADELPHIA, ON THE 2nd, 3rd AND 4th OF AUGUST, 1855.

In pursuance of a call signed by some sixty of the Dentists of Philadelphia and adjacent places, and published, by request, in the Dental News Letter for July, 1855, a meeting of a large number of the Profession was held as above.

The meeting came to order by the appointment of Dr. J. S. Clark, of La., as Chairman, and Dr. J. M. Crowell, of N. Y., Secretary.

On motion of Dr. E. Townsend, a committee was appointed, consisting of Drs. J. McCalla, of Pa.; G. E. Hawes, N. Y.; S. P. Miller, Mass.; Potter, Conn.; Bonsall, Ohio; Munson, D. C.; Brown, N. J.; Goddard, Ky.; Garrett, Del.; C. O. Cone, Md.; and on motion of the chairman of said Committee, Dr. J. S. Clark, of La.

The committee reported the names of Dr. J. B. Rich, of New-York City, for President, and Dr. Chas. Bonsall, of Cincinnati, for Recording Secretary, which report was unanimously adopted, and the gentlemen took their seats.

On motion of Dr. J. S. Clark, a committee of one from each State was appointed to report a plan, with articles of association, for the action of the Convention, and the following gentlemen were appointed as that committee:—Drs. J. S. Clark, of La.; Munson, D. C.; Garrett, Del.; Goddard, Ky.; Cameron, Ohio; Marshall, N. J.; Potter, Conn.; Miller, Mass.; Hawes, N. Y., and Elisha Townsend, Pa.

After a short delay, the committee reported a preamble and "articles of association," which, on motion of Dr. Dwinelle, were taken up

for consideration by articles, and after being very slightly amended, were adopted.

After the adoption of the articles of association, on motion of Dr. E. Parry, the Convention resolved itself into the "American Dental Convention," and the former officers were re-elected *viva voce*, and Dr. J. H. McQuillen, of Philadelphia, elected Corresponding Secretary, by ballot, and Dr. J. S. Clark, of Louisiana, Vice President.

Adjourned to 4 o'clock, P. M.

AFTERNOON SESSION.

Convention met at 4 o'clock, according to adjournment.

The Chair stated that it had been proposed to occupy the present session in professional discussion.

Dr. Townsend made some remarks on the subject of the preparation of gold for filling teeth, and gave some reminiscences and modes of practice, such as rolling gold into pellets of different sizes; uses pellets and folds, and strips of numbers 10 and 30, the thinner the walls and larger the cavity the thinner the number of the gold. Had been told of the form of cylinders, but rather adhered to the use of pellets and folds; alluded to Dr. J. S. Clark as using the cylinders.

Dr. J. S. Clark, of New Orleans, described his method of introducing gold in the shape of cylinders, and manifested great earnestness and fervency on the subject. Said it was one of the few things that, although its claims rested on purely scientific principles, and offered a beautiful theory, it was so much more interesting and beautiful in its practical illustration, that one practical test was worth all the description that could be given.

The old and familiar experiment of producing cohesion, by placing two plane surfaces in contact and forcing out the air, as in the experiment with two leaden bullets, (with planes cut on each and forced together,) will explain the principle of cylinder filling. It is nothing more nor less than taking advantage of this principle in forming a filling from gold foil.

The foil is carefully rolled into cylinders, as a bolt of cloth is rolled, and of a length to suit the depth of cavity, and intended to be a little longer than the cavity is deep. They are rolled of all sizes, from a full sheet down to the size of cambric needle wire. Some are made conical in shape, but most are plain, straight cylinders. Some are rolled very lightly, others quite hard. They are formed by folding the sheet, or part of a sheet of foil, into strips, as *wide* as the cylinder is to be *long*. This strip is then rolled on the point of a very fine (five-sided) instrument, and the strip cut off when the desired size is attained.

The application is to place soft (or lightly rolled) ones in the cavity endwise, being careful that each cylinder reaches the bottom of the cavity and protrudes a little outside the orifice. When the cavity is apparently full, a round instrument is passed down between them, and another cylinder (a little harder rolled) is forced up. This is repeated, decreasing in size of instrument and cylinder, (the latter of increased hardness,) until no more can be introduced. At this point the filling will be found to be one combined mass of gold, which can be

cut and filed into shape, and polished as perfectly as any piece of molten gold, for the cylinders being, when introduced, all ventilated, or open at the end, and of plane surfaces in contact, by this manipulation the air has been forced out, and cohesion taken place according to the natural laws of cohesion.

It is well known that all cavities are not of regular shaft-shape. All variations as to shape are easily filled in this way, by using cone-shaped cylinders, with the base of the cone in or out, as the shape may demand. A cavity with but two opposing walls, and they standing at nearly right-angles, can be filled by springing an arch from one wall to the other. Beside many other advantages, the operator will always be sure of finding the orifice or margin of gold perfect, as to fullness and adaptation.

I have used gold in this way almost exclusively for five years. Showed it at the time to Dr. Freidrichs and Dr. James S. Knapp, of New Orleans, who have adopted it fully, and of whose operations since, the profession have been pleased to speak in the highest terms, but not more than such operation will always deserve. Subsequently, I have shown it to several, who have adopted it; and among those who have tested it for three and four years are Dr. C. W. Spalding and Dr. H. J. B. McKellops, of St. Louis. Names are mentioned, that their operations may be noted as they come under the eye of the profession.

Dr. Townsend did not wish to occupy time, but would state that the greatest difficulty with him, was the preparation of a perfect cavity; and he was often compelled to say, after putting in a filling, "that would be a perfect filling if." Alluding to the difficulty of getting every thing into proper condition, and with proper finish.

Professor Arthur had listened with great interest to the remarks on this subject. The method described by Dr. Clark, he thought eminently fitted to accomplish a great object in filling teeth, the union between the material used for filling, and the periphery of the orifice of the cavity. He had always regarded this as one of the most important, if not the most important feature of the whole operation. The proper preparation of gold for the purpose in question, had always been a subject of great interest to him, and he had for years past experimented a great deal in various ways, to reach the best method. The defects of gold foil, with all its great advantages, had always been a source of trouble to him, and he had been anxious to find some way of overcoming these defects. There was no question, in his estimation, that a great deal would be gained if the different portions of the gold placed in the cavity could be readily made to adhere together, and he had steadily looked forward toward this desideratum. Some years ago he had proposed to use heavy numbers of foil, cut into single strips, and condensed with fine-pointed instruments. In this way, by bringing great pressure upon a very small surface, the different parts were made to adhere; or, if no adhesion actually took place, one layer was forced into the other at so many points, that it simulated adhesion. This Professor A. at the time regarded an advance upon the ordinary method of using foil, and only abandoned it after having used it for more than a year, on account of the difficulty of getting suitable

instruments made, as the necessary instruments being fine and hard, were easily broken, and their frequent renewal involved so great a loss of time, that the advantage gained was not a compensation for it.

When crystallized gold was introduced, Prof. A. had taken hold of it with great avidity. It gave greater promise than any thing he had previously met with. He had used it almost exclusively for more than a year, and, after becoming accustomed to its use, found it of great service. He had undoubtedly found difficulties attending its use.

The President requested Prof. A. to state to the convention the nature of the difficulties he had encountered, in making use of crystallized gold.

Prof. A. was quite willing to state explicitly the nature of the difficulties referred to, but he did not wish to trespass. He would say, however, that he had found it necessary that the material should be kept perfectly dry—moisture, he had found, was fatal to its adhesion; and many cases occur where it is exceedingly difficult to exclude moisture entirely. A great difficulty which he had encountered was from the want of uniformity in the material itself. From the same manufacturers, so far as his experience in its use had gone, it was impossible to get two specimens precisely alike. At one time the article was all that could be desired, and the next lot, perhaps, would be greatly inferior. He had found, also, that it required a greater amount of time to make a reliable filling in many cases, with this material, than with gold foil, as commonly used. It could not be placed in a cavity in large quantities and condensed with large instruments, but it was necessary to use it in small portions and to condense it with very small instruments. But, in the face of these difficulties, Prof. A. had no hesitation in declaring that the results, in his own practice, fully compensated him for the labor he gave to it; and he had been quite willing to devote to it the necessary labor for the results he was able to obtain.

But, in making some experiments to ascertain the relative density between a filling made of gold foil and of crystallized gold, he was led to the discovery that gold foil could be used in precisely the same manner as crystallized gold. [Here Prof. A. described the method of using gold foil, an account of which has already appeared in the "News Letter."]

Dr. Neall remarked, that the cohesion of gold was no new doctrine, but he had not thoroughly comprehended Dr. Clark's method of filling a cavity with cylinders. He (Dr. N.) proposed to make each part of his filling cohere as he introduced it, and not depend upon one portion of the gold packing the other, as he implied must be the case, if cylinders were set up en masse in a cavity, and then compressed.

Interrupted by the President, who stated that remarks must not become discussional on personal methods, but that each, in speaking, should confine himself wholly to the explanation of his own method.

Dr. J. M. Harris gave his experience, and various methods of preparing gold for fillings.

Dr. Neall asked Dr. Clark to explain how he would proceed in filling very angular cavities.

Dr. Clark rose to answer, but

Dr. Rich (President) said he would inform the Convention that his preceptor, Dr. Park, taught him to prepare his gold in cylinders, and he formed them by rolling the gold over a watch *spring*. He then went on to give the method of introducing the gold, which was to place one of these cylinders in the cavity endwise, when it was opened and made to take the shape of the article on which it was rolled; the main spring of a watch and around (in the interstices) between the coils he placed other smaller cylinders, until the cavity was full. He objected to wedge-shaped instruments, and thought them entirely unsuitable. He used straight thin points, flat but not wedge-shaped.

He alluded to crystal gold of recent date, as promising decided improvements. He had tested it by operating in water, saliva, flour and other similar substances, yet without impairing its adhesiveness or preventing its being formed into a solid plug.

[NOTE.—We are forcibly reminded every day of the advantage of comparing notes with different members of the Profession, and of the expansion and elucidation of any subject where a number of minds are concentrated on one point, and especially where the *hand* goes with the *mind*, and actually travels the road that the mind indicates.

The remarks of Dr. Rich at the Convention, brought fresh to mind a similar coincidence. A certain well-known Dentist was asked by the American Society, at one of its meetings, to give his method of separating teeth by pressure. He replied that he used soft wood wedges with different degrees of force, and that THE SALIVA MOISTENING THE WOOD, CAUSED IT TO EXPAND ENOUGH FOR HIS PURPOSE.

Dr. J. B. Rich being also present, rose and stated, that he liked the plan very much, and that it was his method, but he carried it further, and when he completed his operation, he let the teeth back gradually to their original position, for he thought an immediate return of the teeth to their place injurious. On being asked how he accomplished it, he remarked, that he placed a thinner wedge between them. On being again interrogated how he then proceeded, he stated, that the next day he placed another, thinner still, between them, and so on until they had fully returned to their position.

There is one obstruction to the full benefit to be derived from this contact of minds, in the fact that men will not adopt in-

genious suggestions, although fully assured that the suggestor has often tried it with the fullest success.

For example, most Dentists to this day, will not believe that a wedge put in to-day tight enough to stay, can fail to be enlarged to-morrow, and that the wedge put in to-morrow must (to stay in) necessarily be thicker than the one taken out was when first inserted, so that the teeth are daily diverging instead of approximating.

We have also much misgiving about that watch spring, with its loaded interstices.]—EDITOR DENTAL OBTURATOR.

Dr. Dwinelle remarked, that he considered gold foil one of the most valuable agents the profession ever had anything to do with. He did not wish to say any thing *against* foil, but to speak in favor of crystal gold. He alluded to his connection with the introduction and improvement of crystal gold; he thought the ultimatum had been reached, and was fortified in his assertion by the severe tests it had been subjected to by himself and others. It had stood the test. He had failed in some cases, of course, all of which, however, were to be attributed to imperfect manipulation. He considered that an established fact could never be gainsaid, however humble its author might be; a successful operation proves not only its own success, but that it is possible for every one to be equally successful. He believed that many important facts had been established in favor of crystal gold, and that unparalleled success had been gained by its use. He spoke of its superiority over foil in many cases, in that it was capable of being built up into independent forms, and its particles thoroughly integrated together into an absolutely solid mass, which would not absorb moisture, and whose specific gravity was equal to solid gold, as had been repeatedly proven by actual experiment. He referred to stoppings of crystal gold which had been worn in the mouth for two years without change; alluded to decided improvements, which, he said, had been recently made by the manufacturer; and that an entire uniformity in quality could always be relied upon in the future. Its successful use required time, care and experience. Used soft paper in drying out the cavity. Would prefer annealing gold foil without permitting the flame to come in contact with the gold.

Dr. Kingsbury was gratified at having the pleasure of meeting the profession, as he was desirous of learning and imparting, if in his power. Had tried sponge gold in some cases; thought he had made very good fillings; but in the great majority of cases had been able to make better fillings with gold foil, No. 4. Attributed the harshness of foil to friction within the leaves of the book. Had tried annealing on using the foil, and thought well of it. His confidence was greater in good gold foil than in sponge gold.

Dr. S. P. Miller commenced practice with the use of ribbons, folded with a thin spatula; had tried gold in the various forms offered to the

profession; did not condemn the form of cylinders, they being sometimes used, but did not find them equally applicable to differently shaped cavities as pellets. His want of universal success, claimed by others, may have been owing to the fact that he had not so perseveringly continued their use. Much depends on habit; has had the greatest success with pellets of different forms—round, oblong and flattened, with serrated instruments for packing, commencing to fill with pellets, and finishing with ribbons or small ropes. The *oblong* pellets take the place of cylinders, being more easily kept in place. The ribbons of various thicknesses and widths, cut in square blocks, is another excellent form for protecting the thin shell of a front tooth; is not confined to any one form for all cases, but uses flattened pellets—the round pellet slightly pinched between the thumb and finger—more than any other. His experience with sponge gold had been unfavorable; he had found it uneven in quality, and not to retain its color, owing to the retention of impurities in the process of its manufacture; but if the preparation has been so greatly improved as we have just been told, then some objections to its use have been removed. While he did not doubt what he had just heard about sponge fillings, yet, he must say, he had not been so fortunate as to produce the same wonderful results, and have the same success claimed for it, as those who had advocated it so strongly.

Dr. J. D. White humorously remarked that he supposed the cavity now all prepared and dry, ready for filling, and as sponge gold had been tested in so many ways, and with so many other substances, and with so many results, he would suggest the addition of some “cod liver oil,” as calculated to make it much better and sustain its reputation.*

Dr. J. F. B. Flagg had tried sponge gold and his experience was adverse to it. The manufacturers, to judge from their advertisements, seem to expect from the dentist a term of probation in the use of a poor article, before they could trust them with the very superior article, of which we have just been informed. But the article had disappointed the profession, and he must term the course pursued by the manufacturers, humbug, if this new material is what was promised.† [Called to order by the chair.]

* His views on sponge gold have already been given at large in the pages of the *News Letter*.

† PHILADELPHIA, Sept. 13, 1855.

DR. McCURDY—*Dear Sir:*—In an interview with you recently, I understood you that it was the desire of our friend, Dr. Dwinelle, that I should withhold, or modify in some way, the expression made use of by me, in reference to *sponge gold*, at the late convention held in this city. As it affords me an opportunity of explanation, I will embrace it. If a true report is made of those proceedings, it will be seen that *two* gentlemen had preceded myself, and spoken “their fill” in praise of this new agent. In following, I was so unfortunate as to *prefix my fears* to the relation of *my* experience, and the moment I feared a “*humbug*” I was cut short by a hand; fairly decapitated, and my speech, half made up, suffered to hang upon this coarse but very expressive word.

It seems to me that the friends of sponge gold must, at present, be held responsible for *any* meaning that may attach to that expression; and, as I have now consumed the space you say you can afford me in your present number, I suppose I must wait another three months for a suitable opportunity to give my views.

Yours, &c,

J. F. B. FLAGG.

Dr. E. Parry gave his experience with foil, which had served his purpose satisfactorily; alluded to its occasional harshness, which he believed was caused by friction in transmission, and that it deteriorated by absorbing moisture, and was of the opinion that by annealing, its texture and ductility were restored.

On motion, the convention adjourned to meet the next morning at 9½ o'clock, A. M.

FRIDAY MORNING, August 3.

Association met at 9½ o'clock, President in the chair.

After the meeting had come to order, Dr. Arthur made a motion to amend the first article of the association, by inserting the word "Convention" instead of "Congress," and he was, on motion, allowed twenty minutes to give his reasons, which he proceeded to do. The debate was participated in by Drs. Townsend, Flagg, McQuillen, Kingsbury, Dwinelle and Munson, after which the amendment carried, almost unanimously.

Dr. Townsend then suggested, as a fit subject for one hour's discussion, the best method of keeping the mouth and cavity in the tooth perfectly dry during the operation of filling, and gave his method, which was by the use of paper.

Dr. Rich's method of keeping the cavity dry was by the use of paper. He remarked that paper slightly sized will absorb very quickly, and ordinary tissue paper rubbed until the sizing is broken up, and then rolled into rope was a useful application. In the use of napkins, he folded and applied to the lower jaw to absorb the saliva from the ducts, and used them also in other positions; for the ducts of upper jaw used ordinary blotting paper, which he made to adhere to the mouths of the ducts; by such and similar appliances had been enabled to keep the mouth dry for an hour. The paper leaves me nothing to desire. I never have a case in which the water encroaches on me in three-quarters of an hour, I care not how wet the mouth may be.

The President stated that he would now adopt the rule of calling upon the members individually for their experience upon this subject.

Dr. J. M. Harris had used paper, had filled the opposite duct with a pledget of cotton, and used cotton dipped in fine plaster of Paris.

Dr. Ballard had used paper, as described by the President, but of a thicker character. It is known as French bibulous paper, and is manufactured in France and Switzerland for the purpose of protecting from moisture the watch movements, which are exported from those countries in immense numbers.

Dr. Dwinelle would endorse what the President had stated on this subject, and had followed the same mode of practice. Spoke of the absorption of the broken fibre of the paper by capillary attraction.—Alluded to the leakage of serum through the tubuli, and referred to discoloration occurring behind the best of fillings, sometimes; queried whether it was occasioned by exudation of vitiated fluids from dentinal tubuli.

Dr. Clark was indebted to the journals for the suggestion of paper. Had used subsequently lithographic paper softened by rubbing; had found it very useful.

Dr. McQuillen, in the first years of his practice, used finely carded cotton, but at the suggestion of Dr. Townsend, adopted tissue paper; has tried both thick and thin; for general purposes prefers the former, but in absorbing the moisture from the pulp cavity, employs the thin, which, when torn into narrow strips, parallel with the fibres, and rolled tightly, acquires a roughness and flexibility that admits of its being passed a considerable distance up the root; his attention was directed to this fact by Dr. D. Neall. To protect the tooth operated on from the salivary and mucuous secretions, placed strips of muslin (freed from sizing) between the cheek and gum; in addition, when operating on the lower teeth, enveloped the tongue with a small and soft napkin.

Dr. Flagg.—In regard to tissue paper and cotton, we must consider the principle upon which it acts. The sizing he thought very necessary in absorption. Had used strips of fine cotton cambric, which, after washing and starching, he found would draw off the moisture in a very satisfactory manner.

Dr. S. P. Miller had used prepared flax, paper, also cotton, deprived of its oil by boiling in a solution of potash, for drying cavities.

Dr. Kingsbury had used tissue paper for about eight years, which was communicated to him by Dr. Townsend. Used napkins upon the inside and between the gum and cheek. Had found some difficulty in keeping the cavity dry when situated near the gum; had passed strips between the teeth, and used gum-elastic to keep off the edge of the gum from the tooth. Had thought paper, moistened and then dried, would absorb more rapidly.

Dr. Buckingham remarked that, in keeping the margin of gum away from the teeth, he had used soft wood; used paper, and also cotton.

Dr. J. D. White stated that, in applying napkins, he had formed them by folding them around a watch spring, or a strip of sheet lead, from two to three inches wide, so that when applied between the teeth or gum and cheek, they would retain the shape desired. Had invariably succeeded in keeping the mouth dry with a fixture of this kind; regretted he had not brought it with him to illustrate his method.

He had used bibulous paper in drying out the cavity, and would return his thanks to Dr. Ballard for the specimen sent him.

Dr. W. H. Clark had always used lint, and with satisfaction.

Dr. S. L. Mintzer used napkins and cotton, and strips of muslin; was in favor of the use of plaster of Paris. Had found the saliva pump, invented by Dr. Arthur, a very useful contrivance.

Dr. Fuller, in cavities in close approximation to the gum, had used cotton twine, passed between the teeth and forced down between the edge of the gum and the tooth; had used napkins, much after the manner already described, rolled over watch springs, whale-bone, etc.

Dr. H. H. Martin used napkins, cotton, etc., and scraped the cavity just before the application of gold.

Dr. Kingsbury had used sponge about "the size of a piece of chalk."

Dr. Clark wished to say, in evidence of the benefit of the convention, that he had received one idea, which, although a small thing, he felt was worth a pilgrimage of two thousand miles. He was ignorant of the originator of it, but would like to see him and thank him for it.

It was the simple use of a dove-tailed wedge of soft, close-grained wood, passed between the teeth, pressing down the point of gum, (when filling approximal cavities,) arresting hemorrhage and enabling us to operate by sight in that part of the cavity, instead of on suspicion, as well as saving the patient much pain in filing, polishing, &c.

Dr. Townsend had been taught the use of napkins by Dr. Hudson, who was very particular in this matter, and who used them of a suitable size and character. The use of cotton he had abandoned, for the purpose of drying the cavity, but used it in wiping out the debris in the cavity after excavating. Used wedges of wood to press the gum away, but not to penetrate the gum.

Dr. S. P. Miller alluded to the secretions of the mouth in the treatment of approximal cavities, and the great necessity for keeping these surfaces free and clean. In excavating cavities below the margin of the gum, had used chloroform, morphia and tannin, applied on cotton, as astringents.

Dr. J. D. White, by request, described a little apparatus he used on his finger in keeping the tongue away, in filling lower cavities. He gave the idea by forming a piece of paper, somewhat of the character of a ring, to go around the finger, from which a shaft extended parallel with the finger some one and a half inches, on the end of which a circular piece was attached about the size of a ten cent piece, at right angles with the shaft.

To an inquiry put by Dr. Clark, he explained the use he made of tin foil in forming wedges to press the gum away ; had used cotton for the same purpose, forcing it down between the gum and tooth.

Dr. Townsend alluded to the difficulty in keeping the cavities dry on the anterior surfaces of the front teeth. In some cases had used caustics to produce a slough, then, by removing the gum, was enabled to get at the cavity, but always preferred a wedge, where applicable.

Dr. J. M. Harris hoped the profession would make trial of the plaster of Paris, with a view of preventing the discoloration of teeth after having been filled. He was disposed to think favorably of it.

Dr. J. Fleming had used plaster on cotton, after the cavity was prepared, with a view of closing up the tubuli ; wiped the cavity well with the cotton and plaster on the point of an excavator.

Dr. Clark had removed a filling that had been in nearly a score of years, and found, in the bottom of the cavity, dry plaster of Paris.

Dr. S. P. Miller hoped too much would not be left in the cavities at the expense of sponge gold or gold foil.

Dr. Kingsbury could not understand how plaster would answer the purpose, as the current through the tubuli is from the outside toward the centre.

Dr. Townsend wished to explain, that in putting in a wedge, "he cut off both ends of the wood."

On motion, a half hour was devoted to the hearing of cases.

Dr. Dwinelle had had a case which interested him, and which exhibited the ignorance of medical men on the subject of dentistry. Dr. Munson, of Washington, had extracted the teeth of a lady of Washington, and for whom he had inserted a full set of teeth. After wear-

ing the plate a short time, she was annoyed by the appearance of a tumor on the roof of the mouth, for which she had been under medical treatment, and without benefit. The tumor was thought to be of a schirrhous character by her medical attendance. On examination, discovered an opening in the palatine arch, far back, about the size of the head of a pin, the inflammation involving the whole palatine arch. He made broad incisions crosswise, in the hope of finding the cause of all the trouble, when he discovered the point of a bright object, which, on further dissection, proved to be a tooth, and on applying the forceps, extracted an immense cuspidati tooth, which had been lying in an oblique direction, imbedded in the palatine arch and extending into the nasal process, the tooth perfect in form, but diseased with exostosis at the end of the fang.* Gave the particulars of a similar case which had been related to him by a friend.

Dr. Clark alluded to the case of a lady from Belleville, Ill., (age 44,) for whom he inserted a plate in 1840, and finding the plate subsequently thrown up from the gum, and a bright spot on the under side of that part that covered the apex of the palatine arch, found on examination a small cuspidati tooth protruding.

Dr. Searle exhibited a right upper lateral incisor, which he found in nearly an inverted position—the apex of the root lying between the roots of the front incisor and cuspidatus—the biting edge extending upward and backward above the junction of the maxillary and palate bones, the anterior plate of the enamel being towards the palate, and much wasted by absorption; the posterior nearly perfect. Alveolar abscess had existed for many years. A patient, 28 years of age, had suffered much from St. Vitus' Dance and spasms. Three months since the tooth was removed, and, as yet, no return of St. Vitus' Dance or spasms.

He had also removed a right inferior dens sapientia which was *entirely inverted*, and had been the cause of much suffering and anxiety for eighteen years. The tooth was deeply imbedded, the maxilla being much enlarged. Alveolar abscess had existed for twelve or fifteen years, discharging into the mouth. Physicians had called it a case of caries of the maxilla. The discharge ceased in a few weeks after the removal of the tooth, but the enlargement seems to be permanent.

On a call being made, the proceedings of the previous day were read, with the articles of the association, and the minutes approved, when, on motion, adjourned to meet at 3½ o'clock, p. m.

At 3½ o'clock, the President called the meeting to order, after which it was proposed to occupy an half hour in discussing the subject of "allaying the sensibility of dentine in preparing cavities in the teeth for filling."

Dr. Clark used nothing to destroy the sensibility of dentine. He dared not do it, having seen so many cases where the vitality of the tooth had been destroyed through an eighth of an inch of solid dentine. Mentioned a case of a lady for whom he operated this season, who had

* The position of the tooth was made very clear by diagrams upon the black-board.

seven destroyed in that way, and all ulcerated, when the largest cavity when filled, was not larger than a No. 6 shot. He sometimes used astringents, but never escharotics.

Dr. Rich had used most of the substances suggested for the purpose, but had met with the greatest and safest success with ether, used in a certain way. Inhaling small quantities of ether, which entirely removed the sensibility, if administered carefully, was perfectly successful.

Dr. J. M. Harris had used arsenic occasionally, also cobalt and other articles, but ether latterly and generally; spoke of its happy effects, giving illustrations.

Dr. McQuillen had found arsenic efficacious in relieving excessive sensibility at the neck of the tooth. Pursued the plan proposed by Professor White, of rubbing a short piece of dampened thread in dry arsenic, then tying it round the neck of the tooth for four or five hours, when the application is removed, and the surface of bone, which it covered, is well polished with pumice. Never employed arsenic to obtund the sensibility of dentine when preparing a cavity for filling, but used chloride of zinc in the state called butter of zinc, (prior to deliquescence,) when it is soft enough to be cut with the ordinary hatchet-shaped instrument, on the blade of which as small a portion is carried to the cavity as may be desired. To a question, replied that its application is nearly always attended with pain.

Dr. Flagg was in favor of using the arsenic, morphine and creosote in equal parts, but always prepared just before using, and had found it very satisfactory. Had tried ether in some cases.

Dr. Searle had used chloride of zinc in but one instance, and on account of the pain produced, had abandoned it. He preferred *sympathy* and *encouragement* to *poisons* or *caustics*.

Dr. Dwinelle.—The subject interested him greatly, but his success had not been satisfactory; had abandoned the application of arsenic and cobalt. He had found that where it had been used, the teeth generally were injured or destroyed. He used temporary remedies, such as a strong solution of camphor, in repeated applications; also, chloroform, creosote, tannin and tannate of lead. He related an instance in which he had used nitrate of silver, which latter he allowed to remain over night, and, on removing in the morning, he was able to operate with comfort. He explained his method of preparing and applying the arsenic.

Dr. Ballard was pleased to have the opportunity of laying before the meeting a new mode of allaying sensibility. For the past eight months, and latterly with almost invariable success, he had used a combination of chloride of zinc and chloroform. He took a piece of the chloride of zinc about the size of a pea and covered it with chloroform, and used from the soft surface of the zinc. Applied the zinc while excavating, allowing it to drop against the exposed or recent surface of sensitive bone as the decayed matter was being removed. The sensation produced was that of heat. Had never known injury to result from its application. The greatest success with this preparation was met with, when teeth of a soft character are treated; such

teeth are usually the most sensitive. Teeth of a dense character require a longer time in the application before the effect is produced; seldom, however, exceeding two or three minutes. It was only in *very* dense yellow teeth that the application had failed in his hands, though *invariable* success could hardly be expected from any one method of treating teeth of any class. Had never been in the habit of using arsenic, but had seen its effects when applied by others, and considered it objectionable.

Dr. Kingsbury had used arsenic, but with bad results; had also used chloride of zinc, chloroform, gun cotton, etc. He removed the decayed portion as best he could, and then polished the surface of the cavity with pumice.

Dr. S. P. Miller had used arsenic in some cases with great success, also used other substances, as morphine and tannin in equal parts, moistened with creosote or chloroform; also used chloride of zinc with occasional benefit.

Dr. J. J. Griffith had found the greatest sensitiveness at the end of the tooth, where the dentine terminated; had a favorable opinion of arsenic.

Prof. Buckingham used chloride of zinc in as crystalline a form as he could obtain it, as a powerful absorbent.

Dr. James Fleming sharpened his excavators as sharply as possible, and then drew the point over a razor strap, and by careful and dexterous manipulation could generally manage the case with satisfaction.

Dr. John Allen had similar experience to give as the last speaker.

Dr. Kingsbury gave some further explanation of his method.

Dr. C. B. Foster had pursued the course of practice alluded to by Dr. Flagg,—creosote, morphia and arsenic—and on applying it immediately in contact with the exposed nerve, permitting it to remain some three hours. Want of success may be owing possibly to the application of too much or in allowing it to remain too long.

Dr. H. H. Martin had used arsenic but without that success he had anticipated. Used chloride of zinc in its crystal form with success.

Dr. C. Moore had used arsenic, morphia and creosote for ten years; before using it had observed this longitudinal process of removing decayed bone; had applied the arsenic in the dry state from a sense of greater safety, and was of opinion it acted best in that form.

Dr. Neall used arsenic for destroying the nerve, and only when he intended to extirpate that organ. He had for many years abandoned its use and that of all the other common assuatives in obtunding sensibility of dentine. He employed (and with a success almost absolutely invariable) this simple formula: To a four inch fine Arkansas stone add six drops of sweet oil, rub in with the blade of a well-formed and well-tempered excavator, applying the result, a fine keen edge, to the margin of the caries, and, bearing well upon the healthy bone with steadiness and quantum suff. of patience, he could *whip out*, in a moment or two, the major and more sensitive parts of the decay, then proceed to form his cavity more deliberately. He always endeavored to cut as much as possible from centre to circumference, and more toward than from him: putting his patient upon his legitimate endu-

rance, and by a prompt and straightforward manner securing the like from him. He (Dr. N.) believed in the magnetism of backbone.

Dr. J. E. Parker could endorse what had been said by the last gentleman. In some cases had used arsenic with satisfactory results, but always preferred the principle of going to the root of the tree.

Dr. Mintzer only used arsenic when the nerve was exposed; used persuasion—remove a little and postpone further operations for a time.

Dr. Arthur thought that a great deal might profitably be said upon this subject. He had made use of arsenic for the purpose, under discussion, and with good results—results so good as to lead him to say, without hesitation, that by observing very simple and easily understood precautions it might be used safely. In some cases, when he first began to use it, he was free to confess, bad results had followed its use, but he could, subsequently, easily account for these untoward results.—His experience with it had since been of the most satisfactory character. He used it in the dry state and preferred it in the form of cobalt. Cobalt ore contained, he stated, as is well known, a large proportion of arsenic; in combination with cobalt, the arsenic appeared to be less soluble, and consequently less liable to pass through the dentine and affect the pulp injuriously. It was a mistake, he said, to suppose that after the lapse of months or years, arsenic applied in this way could finally reach the pulp unless it was applied in considerable quantity. The minute portion which might remain in the substance of the dentine after preparing a cavity, to which arsenic had been applied for the purpose in question, could not produce the result spoken of. Arsenious acid as it destroys the vitality of a tissue combines with it and becomes inert. For this reason, a given quantity is capable of destroying the vitality of only a given portion of the tissue of a tooth. If a cavity had reached the vicinity of the pulp, and enough arsenic were applied to reach and destroy its vitality, this would occur in a short time. If a few weeks elapsed without untoward symptoms he would not look for them subsequently. He regarded it as necessary that this agent should be used for the purpose of destroying the sensibility of the dentine with great caution, but if due caution were observed it might be employed, in certain cases, with great advantage both to patient and operator. Prof. A. described the method of employing this agent for the purpose under consideration, at some length.

Prof. E. Parry enumerated various articles which he had tried—nostrums ad seriatum—until arsenic came up, which he had used with success.

Dr. Palmer had used arsenic for a number of years, in the smallest possible quantities, in combination with morphia, an objectionable remedy, but efficacious; viewed it in rather a favorable light.

Dr. O. Munson's experience agreed with many others in method of treatment.

Dr. W. H. Goddard had used all the remedies, yet not satisfied; thought Dr. Neall's method the best that had been suggested.

Prof. White thought five minutes too short to do justice to the subject; his confidence in arsenic was unshaken, and he spoke from

an experience of seventeen years. It will destroy the sensibility ; have used it in hundreds of cases ; applied it dry, spread over the whole surface, and could then cut away with the utmost satisfaction and without subsequent danger ; used chloride of zinc where he found that substance which he would denominate corky : it gave a dull pain yet bearable, but after two or three applications the decay may be removed without any pain. Where arsenic had been allowed to remain too long it permeated the gum and then he had to treat the tooth for inflammation of the pulp ; he used it alone in contact with the surface, it thus acts more promptly. It is impossible to use it without danger to the pulp cavity, therefore great care must be observed. He here gave the risks ; was careful to remove every particle ; he never put it in a deep-seated cavity.

Dr. James Locke, by request, explained by models his method of getting up casts or dies by a new form of flask ; after which, on motion, the thanks of the convention were tendered him for the explanations given and for his liberality in bringing it before the profession.

On motion, an assessment of one dollar on those present was made to meet expenses of meeting.

On motion of Dr. Charles Moore, the place and time of meeting for the next year, was now considered, and decided in favor of the city of New York, on the first Wednesday of August.

On motion, adjourned to meet next morning at 9 o'clock.

In the evening, the strangers in the city, by invitation of the Philadelphia members, partook of a collation at Parkinson's, at which many of the good things of life were discussed and appropriate sentiments given by Drs. Arthur, Dwinelle, Townsend, Rich, D. Neall, J. S. Clark, J. D. White, Ballard, Palmer, and C. O. Cone.

SATURDAY MORNING.

The convention came to order at 9½ o'clock. Minutes of the previous day's proceedings read and approved.

Dr. Townsend alluded to the danger of sometimes having a finger bruised in the mouth of the patient, and exhibited an appliance, in the form of a large gold signet ring, which he stated had been presented to him by the heirs of Dr. Flagg, of Boston ; also exhibited two file carriers, of a somewhat peculiar form, and carrying files of a V shape.

Dr. Gilliams would embrace the opportunity to apologize to Dr. Bonsall, for having thirty-five years ago hurt his feelings. Dr. Bonsall immediately explained the circumstance as follows : Thirty-five years ago he had called upon Dr. Gilliams for professional services, on which occasion the Dr. had extracted three teeth for him, one of which he had to split in removing, *which had hurt his feelings very much.*

Dr. Flagg explained his method of taking plaster models either for correcting irregularities or getting his metallic casts. In the composition of casts, used tin 3, lead 7, bismuth 6. Melt lead first, then add the others.

Dr. Townsend, in a few remarks, alluded to the necessity of having to fight both the patient and family physician, because of pre-conceived notions and medical advice, and having to contend against these adverse influences, relating cases in illustration.

He considered filing teeth a very important matter, was rather adverse to wedging teeth apart; preferred filing, the spaces being thus more easily kept clean. Alluded to having seen teeth filed by Dr. Gilliams forty years ago, and in good condition.

Dr. Gilliams gave his experience in filing teeth, remembered a case in which the patient in eating corn off the cob only secured every other grain, this he thought a rather free use of the file, but was favorable to the file, and used it freely.

Dr. S. P. Miller, in speaking on the same subject, related a case where the patient asked him if he "worked on the soft pressure system," stating that she had had her teeth operated on a few weeks prior in New York on that system, without hurting her, but that the fillings were all gone, and she wished her teeth attended to.

He proceeded to make the necessary use of the file and chisel preparatory to filling, but met with great opposition from the patient, who insisted, with much feeling, that he was not operating upon the same principle the former dentist had. By a firm course, however, and appeals to her judgment, she finally consented to have him proceed on what he would term in contradistinction, "the high-pressure principle." He recommended to treat patients with kindness and forbearance, but whenever, from whim or caprice, they undertake to control the operator and drive him from *his* position, to drive them from *theirs*, and require strict obedience to the requirements of the case in hand.

Dr. J. M. Harris was a strong friend to the file, if not direct, indirect; used cutting instruments as a substitute for the file. Had seen many teeth operated upon by many gentlemen—Drs. Hudson, Planton and others. Alluded to the variable character of the teeth, and thought reference should be had to this fact in the use of the file.

Dr. Townsend was glad the different methods of separating the teeth had been spoken of; he used cutters as preferable in many cases; used them much more than files. Thought the dentist should be an artist as well as a dentist; that he should be able to file, as well as supply teeth, with a correct eye and judgment. Was glad to see dentistry cut up in separate branches, as well calculated to improve each branch the more rapidly.

Dr. Miller used the file but very little; cut away nine-tenths with chisels and excavators; file very little between back teeth, but make generous spaces with the chisel.

Dr. Clark.—An interesting question to him; he had much difficulty in bringing patients to what was considered ultraism in the use of the file in separating. It was the "head and front" of his offending in practice, but with young persons could not assent to the use of the file for the entire separations, when the disease could be removed and the tooth preserved in near its normal shape, and a filling be inserted, retaining a perfect margin of enamel around the filling. He used wedges of India rubber, wood, or cotton, according to the case. He always used great care with children's teeth, not to produce too much inflammation. A careless use of India rubber he thought would do it.

On interrogation, said he was not able to point out the idiosyncrasies presented, under which the application of separating wedges were

inadmissible, having never seen in his practice those much-talked-of cases of injury (resulting in the death of the tooth) from their use. He would say, however, that when there was a congested state of the gums, or a tendency to that state, he always had been particularly careful in the application, supposing that injury would more easily be caused by force in separating.

Dr. Flagg was not so strong an advocate of filing teeth; saved as much of a tooth as possible; used India rubber, gradually coaxing the teeth apart. His experience with India rubber had been satisfactory.

Dr. McQuillen preferred the chisels, when applicable, to the file, as by their use the operations are facilitated, and patients do not make the same objections to them. Where the teeth approximate so close to each other as to induce a doubt about the existence of decay, had found the introduction of India rubber between the teeth for a few hours of great service, by separating them sufficiently to admit of a thorough examination; had also found this an advantageous course to be pursued in operating on a class of teeth where the file or chisel must be applied, but from which a very limited portion should be removed.

Dr. John Allen filed freely; was satisfied many teeth could be saved by the use of the file properly applied.

Prof. Parry alluded to a case where two-thirds of the teeth were filed away and were saved; was favorable to the use of chisels when applicable; the practice had come into condemnation from the abuse of it.

Dr. James Locke considered the chief glory of the dentist consisted in saving the natural teeth, rather than in substitutions. The error of many young practitioners was, in filing the front teeth too liberally; he was in favor of a discriminating use of the file.

Prof. Buckingham described an instrument he used for cutting the teeth, which was somewhat in the form of cutting forceps, or Physic's forceps, and which he found very useful in certain cases.

Dr. Ballard never used a file unless compelled; used wedges of wood and India rubber in making a wide separation. When filing was indicated, the operation should be performed thoroughly.

Dr. Neall remarked, he occasionally saw the admirable operations of Hudson, Haydon, Harrington and the earlier operators, in this direction, and thought the operation of filing—its finish, the smoothing of angles, &c., &c.—greatly improved. He considered filing as perfect and as important an operation in its place, as filling; when indicated, went for radical filing for the sake of space, freedom from accumulations, &c., &c. Never filed in straight, but in *curved* lines.—He was very fond of an *old* file, for the sake of the good “stuff” generally to be found in it, of which could be formed cutters, chisels, &c., of every conceivable shape. They, with him, were always the fore-runners of the file, using it mainly for finishing the space or surface.

Dr. Walton was in favor of a free use of the file, and gave his experience with it.

Dr. Dwinelle had used the file more freely than at present. He seldom used it in filling front cavities—used pine wedges, India rubber, cotton, and other substances. Had used boiled India rubber,

which was semi-elastic ; dispensed with the use of the file whenever possible, yet considered it one of the most valuable instruments in a dental case ; related a case where the file had been freely used twenty-five years ago, and the teeth yet in good condition.

Prof. Arthur stated that he always preferred making a permanent separation of teeth requiring filling on their proximate surfaces, to pressing them asunder in the manner advocated by the gentlemen who had preceded him. He preferred this, as a mere act of mastication did a great deal toward keeping these surfaces clean after the operation, contributing consequently a great deal toward their preservation. Upon this subject, a most important one, there was more to be said than could be said by any one on such an occasion.

Dr. Dwinelle explained, by draft upon the black board, how he would operate when the incisors were decayed on the approximal surfaces, in which case he would operate with wedges.

Dr. H. H. Martin felt much interested in the subject, and gave his experience ; he had separated with the file, but had occasionally to replace the fillings when separated, with India rubber ; still used it, however—but chiefly the file.

Dr. Rich had tried all the known substances, except blocks of wood ; was most pleased with boiled India rubber, as preferable to that in the ordinary form ; still used it, as the best article he knew of. In separating, used cutters freely, which had the advantage of removing the tooth-bone more rapidly and pleasantly than the file.

To an inquiry, replied, that he kept the India rubber in place, by the use of metallic caps, silk, etc.

At the close of Dr. Rich's remarks, a proposition was made to change the place of next meeting from New York to Philadelphia, and various reasons given in favor of the change, such as " Philadelphia was most central," " it was the child of Philadelphia," " want of unanimity in New York," and " less professional intercourse there than here," etc., etc., all of which were replied to, and other places proposed, and, after considerable discussion, the proposition was finally withdrawn by the mover.

On motion of Dr. Flagg,

Resolved, That this body recommend to the profession the formation of local associations.

A vote of thanks to the President, for the impartial and satisfactory manner in which he had presided over the convention, was passed unanimously, which was responded to by the President in some complimentary remarks toward those with whom it had been his pleasure and profit to associate with in his studies, his earlier practice, and on the present occasion.

On motion of Dr. Goddard, the thanks of the members residing out of the city (Philadelphia) was returned to the city members, for the kindness extended to them.

On motion, adjourned.

J. R. M'C.

DEGREES.

"KNOWLEDGE IS POWER."

For some time past I have been impressed with the doubtful propriety of Dentists using the initials of the degree of Doctor of Medicine, either in the practice of dentistry, in their contributions to the dental journals, or in the annual announcements of Dental Colleges. In the latter instance, with due deference to the efficient faculties connected with those institutions, it seems to me, that on such an occasion the M. D. or the A. M. are unnecessary adjuncts to the D. D. S., which should appear after the name of each professor. As by legislative enactment they are only empowered to confer the degree of Doctor of Dental Surgery, by *a priori* reasoning, the initials of that degree alone ought to be affixed to their names in the announcements.

The professors in our best medical schools all possess the A. M.; some have had the degree of Doctor of Laws conferred on them, and yet in the annual announcements of the institutions with which they are connected, the M. D. only is attached to their names.

Upon the appearance of a short article, sent to a dental magazine recently, I was the more forcibly impressed with the correctness of these doubts, on finding my name heading it with the initials M. D., D. D. S.

As *Dentists*, I think if we use the initials of any degree, it should be that of Doctor of Dental Surgery only.

My reason for advocating such a movement arises from a sincere conviction that the profession of dentistry is of sufficient importance in the world to stand upon its own basis, and that, in its connection with medicine, instead of being like the vine, compelled to cling for *support* to the trunk of the noble oak, it is rather comparable to the banyan tree, whose branches bending to the earth, take root and draw from the *parent soil*, the components required for its *nutrition* and *future development*.

Dentistry is spoken of as an *art* and a *science*, by the dental practitioner and the community at large. Webster defines these terms in the following lucid manner: "Authors have not always been careful to use the terms *art* and *science* with due discrimination and precision. Music is an *art* as well as a *science*. In general, an *art* is that which depends on practice or performance, and *science* that which depends on abstract or speculative principles. The *theory* of music is a *science*,

the *practice* of it an *art*." That these terms are correctly applied to our profession, certainly will be questioned by no one possessed of the slightest powers of reflection. This position, then, being tenable, has it not, from that very fact, a basis sufficient to give it character and weight, without seeking to borrow dignity from a parent profession?

The estimation in which the profession of medicine is held by the community, is due to the learning and self-sacrificing devotion evinced by its members, in the faithful discharge of their duty amidst dangers that truly test the moral courage of man. Though the arena of usefulness in dentistry is more limited, and unattended by danger, the honest performance of our duties command the respect and spontaneous expression of gratitude from our patients daily. If, however, the sphere of professional action is more circumscribed, there is ample room in the science of the profession for testing and developing the intellectual powers of its practitioners. Physiology and anatomy are as much ours, and it is as much our duty, by careful study, close observation and the instituting of experiments, to endeavor to throw light on the obscure points in the former science, as it is that of the medical man. The principles of surgery, chemistry, mechanics, and other sciences, that have a bearing on the profession, surely open to the dentist a field vast enough to satisfy the longings of the most ardent student. Sufficient if he enters upon a faithful discharge of the duty he owes the *art* and *science* of the profession, to prove that dentistry, instead of being compelled to entirely *absorb* light from extraneous sources, is capable of *reflecting* it upon collateral sciences. In the words of Cowley, let us then—

Begin, be bold, and venture to be wise;
He who defers this work from day to day,
Does on a river's bank expecting stay,
Till the whole stream which stopp'd him should be gone,
That runs, and as it runs, for ever shall run on.

Degrees alone entitle no one to respect. It is knowledge, and the services which we are enabled by its possession to render to our fellows, that should and do command the gratitude, esteem and admiration of men. Was Franklin any more respected by the learned of Europe after the degree of Doctor of Laws had been conferred on him, than he was before that period, when merely known as Mr. Franklin, the philosopher? Is the Rev. Albert Barnes' sphere of usefulness, as a christian teacher and writer, less expanded because he declined the degree of Doctor of Divinity?

It may be asserted, that the community demands from the practi-

tioner of a profession a guarantee of his ability and right to pursue that avocation, before it will repose confidence in him. This is just, and it is on this account that I desire to see the degree conferred by our dental colleges, commanding the respect of the profession and confidence of the public, without necessitating its possessor to obtain an additional degree from a medical college.

At the period when I entered upon the study of dentistry, circumstances, over which I had no control, did not admit of my leaving Philadelphia to seek the only dental college then in existence. It was, however, my good fortune to select a preceptor, in every way qualified to impart to others the extensive store of knowledge which he had acquired by close and correctly directed study; by his precept and example he imparted in my breast not only the most ardent aspirations for the true elevation of our profession, but also the determination to *endeavor* to add at least a limited share to the general stock of knowledge. If, in carrying out this resolution, my efforts should prove futile, I shall at least enjoy the consciousness of having tried. It was under these influences that I entered upon the entire curriculum of medical study.

I am, however, the last one that would wish to discourage others from entering upon the study of medicine, in all its branches; in fact, would, on the contrary, do everything in my power to promote, on the part of dental students, a desire for the most extended research in that direction; but believing our dental schools are in every way prepared to perform for them that which the medical schools only can do for its votaries, of opening the way and directing the course of study to be pursued, I should prefer seeing them enter our schools instead of the medical.

To accomplish this, it seems to me that the proper course to be pursued is, for all dental practitioners who are graduates of or possess honorary degrees from medical colleges, to refrain from using the initials M. D. in the practice of dentistry in their contributions to dental journals, or in the annual announcements of dental colleges; and, furthermore, that *all* the *professorships* in our dental colleges should be filled by *practising dentists*, to the exclusion of *medical practitioners*.

For one, from this time henceforth, I shall dispense with the degree of *medical doctor*. By this act no disrespect is intended to my *Alma Mater*. Towards her, death alone can obliterate the deep sense of obligation for the services rendered to me; and when reflecting upon her position, usefulness, and unsullied reputation, the thought will be

accompanied by a throb of pleasure and pride. But I desire to be known as a dentist, who believes his profession is of sufficient importance to be independent of such extraneous aid.

It is not my wish that any one should imagine from the tenor of these remarks, that in entering upon the study of medicine I was actuated, or suppose others were, or are, by a vain desire to possess a degree. A nobler, a purer motive prompts to such a step. Love of *knowledge*, and the conviction that by *its possession* only, and a faithful discharge of our duties, can dentistry assume and maintain the position amongst the learned professions which her devoted followers desire she should occupy.

By continuing to use the initials of Doctor of Medicine, it appears to me, that we throw ourselves open to the charge of seeking to borrow dignity and importance from a parent profession, instead of being willing to rely upon the *intrinsic merit* and *usefulness* of our own. If this movement should not now meet with encouragement, I feel confident that the day is not far distant when the entire profession will become convinced of the propriety and necessity of the course.

J. H. McQUILLEN.

DR. A. S. TALBERT, *alias* A. S. T. ALBERT.

In the April number of the "Dental Register," there was published an address, which was delivered, before an association of dentists, by A. S. Talbert, D. D. S., of Lexington, Ky. In that address occurs the following in regard to the preparation of approximal cavities:

"I will simply enter my protest against all separations produced by gutta percha, India rubber, wooden wedges, cotton, or any thing else," (meaning, except the file.)

"Three instruments only are necessary—the hatchet, the hoe and the hard drill. Excavators, bent upon themselves in two or three directions, are good for nothing in removing decay, and should be discarded."

The drill (which he describes as of peculiar shape, having a straight cutting edge) he says, "when hardened as hard as fire and water will make it, then polished, is ready for use."

In the May No. of the Obturator, we thought proper to enter our "protest," first, to the peculiar manner of preparing burnt steel for drills.

Second, to so sweeping a denunciation against all other forms of instruments, except the "hatchet, the hoe and the hard drill."

And last, but not least, against such a full and absolute condemnation of all separations by pressure instead of the file, especially as applied to the teeth of children and young persons.

In the October No. of the Register, the review is answered by the same A. S. Talbert, unmistakeably, although he assumes the name of A. S. T. Albert.

This answer to these three articles of "*protest*" is peculiarly clear and convincing.

It opens with the following sentence: "*Commendable as are the objects of this new light to our profession, incubated by the genial rays of the sunny South, and fostered by a host of enterprising publishers.*"

This is immediately followed by a breath of Lexington wind, over the syntax of the introductory article in the Obturator.

Having such a fine specimen in (anti) climax as the above, we shall most undoubtedly improve, although, he having taken us under instruction, we think should have been kind enough to have pointed out the error in syntax; but that is not his style of teaching, as we shall presently see, for he gives us samples of the much talked of *inductive method*.

His next explanation is by asking how much business a man must do who extirpates one nerve pulp per day for say six months in the year; and the next is an inquiry of Mrs. Partington, (with whom he is familiar, it seems,) what "the actual cautery is?" Poor KOEGER, your blunder is discovered.

His next explanation is perfectly luminous. "That paper was not written for publication, but to read before the association, and blunt points and careless expressions were thrown in ON PURPOSE to excite discussion."

This is a sample of "*inductive*" teaching, and what visions of school marms and village critics does it bring to mind, of the "long ago," before the "school-master" went "abroad." For example:

"The class in reading and spelling will come forward."

Teacher reads—"The thief will bite the dog at night."

Scholar.—"The *dog* will *bite* the thief at night."

Teacher.—"Good boy,—you can go to the head."

Teacher.—"John, spell dog."

John.—"I can't thur."

Teacher.—"P-u-p,—dog."

John.—"That dog won't bite, he's a pup."

Teacher.—“Class is dismissed. John, you can go out. You’ll be President some day.”

We remember to have listened to the eloquent and lamented T. S. Grimpe, before an association of teachers, convened in that same city of Cincinnati, some twenty-two years ago, and, although his views of an “America education” were thoroughly “eclectic,” still, we never dreamed of the improvement in the style of teaching by which the “Mississippi Valley Society” were treated in the shape of the application of “*blunt points*” of burnt steel, “to excite discussion.”

SOMETHING NEW.

While engaged in the practice of that specialty of our Profession, the “restoration of the face to its original contour,” at No. 30 Bond-street, N. Y., Dr. Allen (the inventor of continuous gum used in this practice,) and myself instituted some experiments with arsenic in combination with platina, for the purpose of producing a solder to be used instead of pure gold, which proved perfectly successful.

Turner’s Chemistry, in an article on alloys, says that platina mixed with nine parts arsenic, forms a metal that will flow at a red heat and that by a higher heat the arsenic is driven off, leaving the pure platina in its normal state.

We found, however, that three parts platina to one of arsenic, produced a solder that flows easy enough for the blow-pipe, but the best way to use it is to heat the job to a red heat, when it will flow by being applied, if not, a jet from the blow-pipe will do it. The reason that it will not flow as well by the ordinary mode of heating up with the solder on, is that the heat drives off the arsenic too soon, and when the job becomes heated, it will not flow; therefore it should not be put on until the job is heated.

It is but just to say that Dr. Edward Roberts first called our attention to it:

TO MAKE IT.—Take metallic arsenic and place it on a coal. Then lay the platina scraps over it, so as to shield the arsenic partially from the flame; then, with a blow-pipe heat the mass, and they will be easily amalgamated. This forms a brittle metal, which will flow as stated. It is every way superior to gold, for it will flow and remain in greater body, and will stiffen the plate materially. After it flows, pure nitric acid will not act on it in the least, so that even if it were not covered by the gum and body, no injury would probably result from its contact with the fluids of the mouth.

FORCEPS FOR PHYSICIANS AND COUNTRY PRACTITIONERS.

We have often spent useless hours in assisting Physicians who practice in the country (and who are compelled to extract teeth,) to procure from the common stock of instruments, a few forceps that might come somewhere near the thing needed by them in their practice.

This summer we gave Jones, White & McCurdy, a selection of shapes, so constructed that four or five instruments would answer the necessities of most practitioners, and they have constructed a small roll-case, containing five forceps and a gum lancet, and constituted Messrs. Hyde & Goodrich, corner of Canal and Royal-streets, N. O., their agents for the sale of them.

We think they will be found to answer the purpose admirably.

The lower molar (double beak) forcep is so shaped as to answer for the lower molars of both sides. This forcep is to be used with the hand on the under side when applying it. The upper molar, although of single beak, also will be found to apply to the upper molars and dens sapientia of both sides of the upper jaw. The slightly-bent forcep will apply to the bicuspsids of both sides, as well as to any other tooth of single fang in the circle.

The other two are spicular forceps, and also adapted to the removal of the deciduous teeth of children.

This case is so compact that it can be carried in the pocket, and we hope will be found useful. This is our only desire and interest in the matter, as we have no interest whatever in the sale, but shall feel amply paid if they prove useful.

Perhaps our medical friends will pardon the additional remark, that in extracting with the forcep it is always necessary to place the fore finger between the handle of the forcep, to prevent too much cutting force, for many teeth are broken off by too full a grasp. And again, the beaks of the forcep should be carried up to the edge of the alveolar process at the moment of grasping the tooth.

DENTISTRY IN 1855. — Whoever attempts to arrest disease in the teeth of the present generation, will find himself attempting that which bears about the same relative comparison to the same practice of 1835, as a dollar does to a dime.

Many a man has drank whiskey a whole life-time, and died at an advanced age. They did not live long because they drank whiskey, but lived *in spite* of it. Some teeth may be "*stuffed*," and be preserved

in spite of such imperfect operation. Stuffing will do for some teeth—samples of which were numerous in the last half century, but what shall we say of “stuffing” the soft, half-formed teeth of the “rising generation,” not half of whom can retain the *four first molars*.

It is probably true that our profession has made an advance (in its adaptation to combat disease, and in comparison with any other profession, supply loss) of a century, in fifteen years, and our colleges announce a large increase in the number of students, but has the remedy kept pace with the disease, and will our colleges send out men, in sufficient numbers, who will prove to be the *careful, competent operators*, adapted to the present and rising generation. “*Nous verrons.*”

GUTTA PERCHA FOR TEMPORARY WORK. — We have learned from Dr. Slayton, his method of putting up this work, and feel satisfied that it will answer an admirable purpose for all that he now offers it to the profession for—TEMPORARY SETTS.

Great confidence is entertained in the final production of an article of much harder and finer texture, that will enable us to produce all the fine tints of color, in imitation of the mucous membrane; and these plates, as elastic as steel and capable of receiving as fine a polish as the finest shell. This is an interesting subject to dentists, and we think it is in able hands, and shall watch for the results with interest.

DENTAL PERIODICALS. — We have received the DENTAL REGISTER, NEW-YORK RECORDER, NEWS LETTER, and FORCEP, and have the desire to say good things of all, but as the Obturator has been evolved “*on the wing*,” we will let it suffice to offer friendly greetings to the several editors, and wish them all, in advance, “a happy new year.”

Dr. Franklin’s Cup for taking lower plaster impressions, is certainly a great improvement. This cup is like a double impression cap open through over the whole alveolar ridge. The great difficulty has been in getting the plaster, in a thin state, on to the lower alveolar, and at the same time to be sure that the ridge passed to its place in the groove in the cup. This cup shows throughout it, the position of the ridge, and plaster can be poured into the upper part of the cup with great facility. This, at least, is the way we have used it with great satisfaction, although differing from the instructions. We feel sure they will be highly prized by the Profession.

THE DENTAL OBTURATOR.

VOL. I.]

FEBRUARY, 1856.

[NO. IV.]

OBTURATOR CHIPS.—No. 3.

A gentleman making a bad play at billiards catches up a piece of chalk, and most industriously chafes the point of his cue, finding great relief in the act. A vocalist, failing in a satisfactory execution of his part, goes through the pantomime of semi-suffocation, as from a bad cold. A man in the West, in placing a stamp on his letter, after lapping off the unctious gum (while thinking of his sweetheart) from Uncle Sam's frank, and finding it likely to come off, writes under it, "*Paid—if the darn thing sticks.*"

No one can have any objection to this "retort courteous" on his "goatship," for it does no harm, and really alleviates the chagrin of failure. In fact, it is refreshing, in these days of skepticism and abandonment of old ceremonies, to find one of the symbolical relicts of old so universally preserved as that of the constant use of a "scape-goat;" but we must object to the manner in which the said animal is domesticated, and although so often started on his "winding way," somehow or other, in these latter days, he never really goes, but often stays, to the detriment of servants and small children. For instance, Mistress enters the kitchen, and, finding sundry culinary mistakes, wakes up, with a *flat argument*, the first child, or knocks over the first little darkey that comes in her way.

This is bad enough in the domestic shape, but, unfortunately, the goat is a climbing animal, and, not satisfied with the juxtaposition of pots and kettles, has found his way into the halls of science, and sad work he makes with sundry preparations accounted to be superstructures built upon fixed facts, sometimes called theories, and sometimes diagnoses.

Fifteen or twenty years ago there was a great epidemic, which might be demonstrated the "*Tic Doloieux*" epidemic. How many ladies of our acquaintance, of a certain age, have not suffered with it? Who does not know that poor "*tic*" had to officiate as "*scape-tic*" for all the

pains of the facial angles that could not be satisfactorily accounted for? This, of course, explained the thing, clear as Mississippi water, and satisfied both parties, so far as science was concerned.

About the same time arose the mercurial epidemic, which was more extensive and disastrous in its effects.

Bad enough were its dark doings, and sad enough the ruin it brought. But it was soon found to be a very convenient "scape" on every occasion where suffering humanity used the language of pain, or gave indications of organic disturbance or disease, and forthwith it was installed with the "horns" which we fear it has worn ever since. Poor misguided metal! how many ills have you made "flesh heir to!" Yes, and bones too, and, (if we believe the "common fame" report,) not content with gnawing bones, you have invaded (chemically) the Palace of Jewels, and bored holes in the most cruel manner through the beautifully-enameled casket, and left your black finger-points in the gap.

We might have passed over the advent of the animal, had he been confined to common therapeutical developments, but we have to record that, true to his climbing propensities, he has invaded the *higher circle* of practice in the healing art, even that of Dental Surgery, and there he is prone to dance attendance on the modern epipemic.

AMALGAMANIA.

It would be entirely useless to recount the dark scenes connected with the crawcourean advent, or to follow the train of his followers; for are not their acts indelibly written in colors that never fade?

We have no wish to recall the actors, or to censure their acts, but leave them to the society of their own retrospective thoughts.

From the first we regarded the practice of using amalgam as decidedly bad; time confirmed the judgment, and years of sympathy with its victims have not lessened our disgust at the plastering operations that almost daily darken the reflectors of our operating room. It is sad—it is pitiful—it is contemptible—it is dishonest and cruel, to use it thus.

But, gentlemen of an enlightened and liberal profession, bad as this is, and bad as have been its fruits, let us meet this question fairly and honestly. We have no need of subterfuge or disingenuous views.

In the first place, we need not make it the "scape-goat" of all the dark stains that hang about the buccal cavity.

We need not fill our heads so full of "galvanic batteries" that we can see nothing but oxydation in every combination, pytalism in all mucous irritation, or mercurial fetor in every odor that comes hot and

strong from the operating chair. Pure scientific accumen is a good thing; but science on stilts is sure to catch a fall.

Chemistry is an excellent solvent of many difficult questions; but chemistry sublimated can furnish more "knock-down" arguments than any other pseudo-scientific arsenal. Chemistry is very much like the Bible—rich in truths, perfect in system, and unyielding in principle; but if not properly understood, or deeply studied, will furnish heterodox, paradox or orthodox, "ad libitum."

That we may not be misunderstood, we will try to explain what is meant by the term here used—"knock-down arguments." A few years since, the proposition to deprive a tooth of the nerve when exposed, and still retain it in the mouth, was met by the simple argument of "*foreign body*." Of course that settled the question with the scientific "*corps*," and the answer just suited the *wishes* of the majority.

Again, fang-filling was "*broached*." "Oh, they will ulcerate," says science. "That's enough," says the anxious Dentist and the satisfied patient. We could give many more illustrations, but let this suffice—that a smattering of science and a good-sized wish, amounting to a strong desire, will produce at any time a huge "knock-down argument," endorsed by all the popular science of the period.

We do not intend to go into an investigation of the amalgam question, simply because we are incompetent to the task, having no experience in its use; and we regard mere theory, interspersed with shreds of chemistry, as useless in comparison with absolute facts.

Now it is asserted that reasoning from chemical analysis and analogy, it does and must oxydize. On the other hand, equally positive is the assertion that it does not.

On one hand this oxydation is pronounced death on dentine. On the other it is proclaimed harmless.

How shall we settle this question?

By demonstrative fact, say we; and it is susceptible of such proof.

The other points, if we understand it, are all collateral to these, for if the metals do not part with substance, there can be no effect on the animal economy.

We hold no fellowship with the "fearful souls that tire and faint" in the examination of this subject. We allow of no "tender points" hedged in by conservative fears. It is rather our desire, as well as practice, to examine carefully, and to be very particular in our diagnosis, just where tenderness gives warning of "something wrong."

We have great respect for the genuine feeling of responsibility as

connected with the proper endorsement of a great name on the back of a good sized commercial obligation, but none whatever for the great man who refuses to do a great (good) act for fear of endorsing unworthy or dishonest imitations. The fire warms and comforts our child this chilly day. Our less careful neighbor to-day is homeless and childless from its abuse. Arsenic is a blessing: it has proved a curse.

No! we have nothing to do with the constant abuse of a good thing that is inevitable in everything. Our mission is not to "father all creation, but to make our acts worthy of imitation in spirit and in truth."

POPULAR COMPLAINTS:

"MY PATIENTS WON'T PAY FOR THE BEST OPERATIONS."

To a good operator this ought to be a very humbling confession.—First, because he must have failed to convince his patients that he merited good prices. Patients are not all fools, or possessed of too little discrimination to detect the difference in point of interest alone between a good operation and a bad or imperfect one; and there is nothing that persons are willing to pay more liberally for than good Dental operations, and we hold it to be impossible for a Dentist to apply universally the highest perfection of the Dental art and fail to convince his patients of the fact; for, unlike medicine, there is a good degree of demonstration in it.

You cannot convince a thousand patients who have the clean, purer, permanent stoppings in their mouths, that have stood the test of years, that the Dentist who placed them there is not a good operator, or that any Dentist is entitled to a higher remuneration than he is; consequently, the above confession is an admission that the first point of merit (in point of fees,) is wanting, viz. that of demonstration.

Secondly—this is an humiliating confession; because it is admitting the performance of operations of an inferior character.

Patients have many faults affecting the comfort of the Dentist, but more affecting the character of his operations. That rests alone with the Dentist, and he alone is responsible for the want of as much perfection as lies in his power to give. To decide this point, we have only to point to the mere fact of his professing to be a Dentist. What does that imply? What does he profess?

Does he profess to use only a *part* of his knowledge and skill for the benefit of his patients? Does he profess to stir up the disease a little

for one dollar? stuff or plaster up the fœtid foramen a little for two? make it a little harder, and increase the difficulty a little more, for three? or excavate thoroughly and fill it imperviously for four? and secure it by a polished margin as well as he can for five? Is there a single point, short of the last, consistent with his professions?

Is there a point short of that that he has any right to stop at, even if the operation is gratuitous? There can be but one right way, so far as he is concerned; and has he the least shadow of a right to do a professional wrong? It may be said that perhaps the patient will not submit to thorough excavation, &c. Then the Dentist should refuse to operate, or even to finish an operation, if commenced, if he meets with the refusal. Patients should be made to take their full share of the responsibility; but Dentists should be willing to take *their's*, and we hold that there can be no exchange in this matter.

The patient is merely a person suffering under an attack of disease, and, in applying to a Dentist, is to remain a patient still, and as such is entitled to the maximum of the professed ability to arrest this disease. The Dentist may contract to operate for one dollar where he ought to receive ten; but having contracted, he is bound, by every principle of honor, personal and professional, to render his best services.

Thirdly, it is humiliating.

Because it is a sad commentary on his standing in the community of his patients. If his statements to them have universally been found to be correct, he will find little difficulty in reaping the reward of his honesty in the belief that will be accorded to his statements.

Let a Dentist make himself reliable, both personally and professionally, and he never need complain that patients will not remunerate him reasonably for his operations.

In this, as in other things, the world is often a better friend to a man than he is to himself. There is a great deal of grumbling about the want of confidence and support on the part of the community that some men are unlucky enough to have settled in.

We own the careless, busy, unthinking world is slow enough to appreciate a high order of merit or skill. But the fault lies deeper than their intentions or designs.

It lies just where it does when the poor, self-ruined sensualist complains that the weather is too cold or too hot, and he declares it a bore, and finds fault with the very blessings of existence.

Did one ever see a good-for-nothing loafer, too lazy to work, that did not complain of sundry huge evils in the community?

There are evils and trials to be met, but they are to be met like men with unflinching faith in things of deeper philosophy than floats on the surface of every incident of life.

The husbandman, as he turns the mellow soil, does not look back at the first mark of the plough share and expect to see the waving grain as the immediate result of his labor.

He faithfully tills the soil, casts the seed, and trusts that, in proportion to his faithfulness, will be the result. We only wish the farmer was as sure of a harvest in proportion to skill and faithfulness, always, as the faithful and competent Dentist is of success. The one bides the fate of wind and storm; the other trusts the simple utility of rectitude. The one trusts to the probability of a favorable season; the other a principle as immutable as truth.

We have been considering the point of utility and there can be no doubt that it runs parallel to truth and the full adoption of principle as the only guide in practice, but we do not present it as the inducement.

We hold that a Dentist had better fail than truckle to the first item of wrong in practice; and if he fails of support, he had better seek some other means of support, for he has no right to commit depredations for a living. No! there is a right and a wrong way in every case. They are antagonistic, and can never be amalgamated; and can he be an honest man who attempts it?

“WE DON'T READ!”

Strange to say, there are men calling themselves Dentists, who boast that they “don't read any of the Dental works or publications.”

What lucky mortals! to whom is vouchsafed the full concentrated wisdom to know all that is or can be known of a science whose foundations are as broad and deep as the unfathomable laws regulating the world of animate and inanimate matter! whose hands move intuitively to the arts with a full fledged perfection at the first attempt! whose eye just naturally blinked into a perfect education at first sight!

What fools most of the really great men of the age have been making of themselves. Literary men, statesmen, philosophers, professors in the sciences, not to mention the great lights in the different professions, whose whole business and aim has been to master and apply in combination the accumulated développement of scientific fact to their particular art or calling. Most of these men have thrown away the greater part

of their lives poring over books, keeping themselves posted up perfectly in all the new developments that have so distinguished the age. Indeed, it has been considered quite an achievement in our own profession to wade through scores of pages in search of an original idea—and when found to remember it.

But we are making a false issue. These men are not Dentists—they practice a trade and even are far behind their fellows, for the intelligent mechanic reads, and the history of the different trades for the last half century will show perfect revolutionary changes effected by accumulated written experiences.

These men have learned or stolen the trade as a man would the art of making a shoe, and with them a shoe is a shoe, and a tooth is a tooth. They have "pulled a tooth," and don't they know how to "pull teeth?" They have stuffed a tooth, and don't they know all about plugging teeth? therefore, they are Dentists; aye, even call themselves Dental Surgeons. But who shall decide this point? We do not pretend to decide, but they decide it, some of them, for us. One of the most prominent of this feather not long since boasted that "*he never polished a filling or a tooth that he had filled in his life,*" and he has been "*working at the trade*" twenty years or more.

This, to our mind, is conclusive evidence that he ought to drop the name of Dentist, having no right to the title.

In this connection we would call attention to one popular fallacy in regard to professional standing. The world judges that "money makes the man—the want of it the fellow." This feeling is also extended to the Dentist. Money-making, and the possession of wealth, is taken as evidence of professional ability. It is, or ought to be, known that there are hundreds and perhaps thousands of men called Dentists, that live off from regular stealings, under the name of Dentistry; also, that any Dentist of much practice can easily increase his income, say \$1000 or more per year by unfaithfulness to his patients and wrong operations. A man may be a successful gambler, speculator, or Shylock, but this ought not to be taken as evidence of superior professional abilities. One Dentist may make ten thousand dollars per year and have less money at its close than another who makes only three thousand. Money distinctions may do for the world of fashion or bargain and sale, but will never be a proper test of professional fitness or acquirement if it were. Henry Clay or Daniel Webster had many superiors, for both were proverbially careless as to the accumulation of wealth.

UNFORTUNATE PRECEDENTS.

There are many Dentists, and some have even grown gray in the practice, who feel really anxious to change the character of their operations for the better, and who have the ability to do so, but feel that their precedents are all wrong. They have for years practiced in the popular style of operating in a hurried way, and acceded to the wishes of their numerous patients with more or less thoroughness, according to circumstances. Experience has taught them the fallacy of this supposed necessity, and they find that it is hard to change and refuse their services when patients desire them to deviate from what they now know to be the best practice.

We know it is easy for any one to find fault and to point out errors, but not so easy always to point out the remedy.

In the present case the remedy is simple and effective.

It is never too late to do right. Let any one just try it a year or two. It is simply this :

Take no more patients than can be attended to in the highest style of the art at command ; to never do less than the very best that can be done for any one under all circumstances.

This may seem like a hard experiment for a Dentist to divide the operations offered on some particular days into a dozen appointments, but it is only controlling the time that was heretofore left to the control of accident or the convenience of patients, and will be found in the end to impart to those very patients a very salutary lesson as to the importance of a more than casual attendance to their teeth. They never will appreciate the value of the operation, or their position when visiting the Dentist, until they relinquish the idea that they can employ the odds and ends of time left from a stroll among the "tape-sellers," by "getting their teeth fixed."

When ladies think they can buy ribbons and other dry goods, and step into the Dentist's and buy their dental operations on the same terms and with the same facility, they will never fully appreciate the Dentist, or his operations.

This is not the argument in favor of the deliberate regulations of one's business, but it is one of the strong collaterals, and any good and correct carrying out of principle is full of just such strong collateral corroborating points.

It may cost a great deal of hard work and some chagrin for an old practitioner to follow "Obediah Oldbug," and "turn over a new leaf," but we wish all things desirable had as much certainty as there is that

this will satisfy any one by its beneficial results, even in point of policy. It is astonishing how much a man may do by systematizing his time with patients, and by filling up his hours by regular appointment and by constant punctual attention to those hours on the part of patient and operator. Patients soon learn to be punctual when the operator shows them the necessity of it. Let them find that they cannot control his time and make him suit their caprices, and the whole order of things in regard to their ideas of dentistry will change. Who among us does not know that at least one-half of our difficulties vanish when patients come to us with the right understanding of their and our positions in the matter.

One-half of all the troubles arising between the dentist and his patient arises from a want of *starting right*. But this comes under another head, embracing principles of mere policy, while here we have broad principles of right and wrong for our guidance.

We do not hesitate to say that any man who will just plant himself on the firm rock of the conscientious, unwavering devotion to a thorough performance of the best he knows in all cases, be he young or old in the practice, he will not be long in convincing himself that in this, as in all other things, "honesty is the best policy."

ON FILLING TEETH.—(CONTINUED FROM PAGE 45.)

In filling a deep small cavity, or in completing a large filling on an approximal surface, it is not always an easy matter to pack the foil thoroughly in the deep and narrow foramen and then with the roll, strip or pellet, it must necessarily be packed from the bottom up, and that with very small instruments. But with cylinders the gold becomes the instrument, so to speak, and a cylinder can be forced down to the very bottom of the cavity, larger than the instrument necessary to pack with. For instance, say between the incisor teeth. A filling is to be inserted one line deep and half a line in circumference, while the separation between the teeth is less than half a line.

To pack gold in such a cavity a very small instrument will be necessary, with which very little force can be used, and then it is doubtful whether the packing can always be perfectly done to the bottom of the cavity. In this case, the first cylinder may be put in large enough to half fill the cavity, and sent to the bottom of the cavity as perfectly as desired. Two or three more will complete the operation,

and the last be driven home as perfectly as the first. In filling deep cavities, however, we use the last but one only half as long as the cavity is deep, which is forced down, and, as it were, headed against the bottom of the cavity, which also spreads that inner surface; then the last being forced down to that, if any imperfection exists in the contact of gold, it will probably be in the center of the filling.

Again: suppose a cavity on the posterior surface of the last upper molar so situated that all operations must be performed by the use of a reflector. All that is necessary to accomplish this is to enter the point of the cylinders by the aid of the glass, when they are easily forced home. The first, in this case, may be apparently as large as the cavity; an instrument forced down by its side prepares the way for another, and so on until it is full. In this case, the cylinder does away with the use of a packing instrument; and even in these cases the filling may be as perfect in adaptation, solidity and finish, as in any other position; and if any fillings need extra perfection, they are those that cannot be seen and examined with facility. The more concealed, the more perfection is required.

It is well known that in filling all cavities between the bicuspid or molar teeth, the great protective point should be its lower margin, or that near the gum.

It is easy enough to "mash up" (excuse the term) a mass of gold so as to make a filling that will be hard and impervious, and look yellow under a burnish, but does not that point generally show signs of imperfection even in the fillings of good operators? We do not say this to gain a point, but to *point a fact*.

Will not the best operators be glad to know that the first third of their filling, say from that point lies in compact, smooth lamina against that wall?

This may be accomplished by a single cylinder, in most cases, made of the right length to protrude from the mouth of the cavity to the adjoining tooth, and forced up against that wall.

[From the Dental News Letter.]

TRANSACTIONS OF THE PENNSYLVANIA ASSOCIATION OF DENTAL SURGEONS.

The annual stated meeting of the Pennsylvania Association of Dental Surgeons, was held at the Dental College, October 2, 1855, the President, Dr. Daniel Neall, in the chair. The following officers were elected for the ensuing year: President, Dr. Elisha Townsend; Vice-

President, Dr. W. W. Fouché; Recording Secretary, Jas. E. Garretson; Treasurer, Dr. David Roberts; Librarian, Dr. S. Dillingham; Committee on Membership, Drs. Edw. Townsend, J. H. McQuillen and Jas. E. Garretson.

At this, and an adjourned stated meeting, held October 9, 1855, the attention of the members present was engrossed by the necessary business of the Association. Reports of committees, election of officers, election of new members, (the following gentlemen having been duly elected active members: Dr. Daniel McFarland, Washington, D. C., Dr. John H. Githens, of Philadelphia, and Dr. C. A. Kingsbury, of Mount Holly, N. J.) the appointment of a committee to superintend the publication of the transactions of the society, (the columns of the Dental News Letter having been offered to the association for that purpose by Dr. J. R. McCurdy,) the adoption of an amendment to the by-laws; changing the Examining Committee to a Committee on Membership; the appointment of a committee for the purpose of increasing the society's library, and lastly, Prof. White was requested, by the President, to prepare a dissertation for the next stated meeting.

A special meeting of the Association was held at the Dental College, October 16, 1855, the President, Dr. Elisha Townsend, in the chair.—Members present, Drs. Arthur, Williams, Neall, White, Pierce, Buckingham, Dillingham, Calvert, Flagg, Harris, Roberts, McCurdy, Du Bouchet, Edw. Townsend, Garretson and McQuillen.

The principal interest of the meeting was the consideration of the amalgam question, as presented in the Dental News Letter by Dr. Elisha Townsend. The doctor, at the desire of the meeting, arose and said:—He was glad to have the opportunity of defining his position in this matter; felt and knew that he had been misunderstood; wished that his views should be made very clear, and the sincerity of his sentiments appreciated; alluded to the length of time he had been in practice; to the strides toward perfection the profession had made in that period; the exposition of old ideas and prejudices, and the adoption of new and true ones; experience proving their truth. Few bodies of men were ever joined together for a common good, who had individually labored more honestly, or with more singleness of heart for the good of the whole.

He was proud of his profession and of his brethren engaged with him in its cultivation, and was unwilling the antiquarian spirit should bury him in the relics of the past. If, in what I now have to say to you, you deem me in error, do not hastily condemn the suggestion I make, but let me ask you, each and all, to experiment in the article of amalgam, with an eye single and sincerely desirous of eliciting the truth, whatever that may be—be careful in your experiments and in all your manipulations; do not take anything upon trust from me, or use it blindly and indiscriminately because I do, but see for yourselves. "Mark, learn and inwardly digest," before you add your weight of sanction to mine in giving character that after all may not belong of right to the article of which I speak. By thus doing you will strengthen and aid me if I am right, and will deserve the thanks of the profession and the public as well as mine. If I am wrong, and you can convince me of it,

you shall have my sincere and heartfelt thanks. I wish the greatest good of the profession, and that through its increasing knowledge, its usefulness may be so increased that it shall be an honor and privilege to be ranked among its cultivators. You are aware, from my article in the News Letter, that I have occasionally used the article of amalgam in my practice, and I think my duty to my patients compels me to do so. The new method of preparation rids it of the greatest objection to it—its blackness, and scientific experiment has proved that it cannot be injurious to the mouth or teeth in any other way. The present mode of preparation, we think, secures it from the possibility of discoloration. Do not misunderstand me; I do not advocate the use of it to the exclusion of gold, or in cases where a solid filling of gold can be placed, but there are teeth worth saving, if even for a short period, where any filling requiring pressure to compact it would be inadmissible, and here a plastic material is invaluable. I know there are some prodigies who *never* are baffled, who *never* see a tooth they cannot fill with gold. I am *not* a prodigy, and I do often see teeth my patient will thank me for saving, if even for a few months, which I have not the skill to fill with gold.

The Doctor here presented an artistical crown of amalgam built upon the fangs of an inferior molar. This, gentlemen, is the counterpart of an operation performed in the mouth of a lady, a few weeks since; she came to me to have it extracted, and is now using it with perfect comfort with its artificial crown. The manner of building it was thus: a piece of watch spring well annealed was carefully fitted around the fang, passing under the free margin of the gum; into this the filling was packed and built up to the height necessary for the proper antagonization with the superior tooth; the spring was allowed to remain for an hour, then removed and the edges trimmed and packed and burnished. In two days the patient returned, when the filling was stoned and polished, as the one I present to you. After some remarks on the chemical affinity of the metals used, the Doctor said that as long as there was no loss of substance, no disintegration of the particles of the filling, there could be no systematic effect produced.

A member asked, "if the metals employed were required to be pure?"

Certainly, the mercury of the shops has to be purified chemically.

[By request, Dr. T. here prepared some amalgam, according to the recipe given in the News Letter, and filled a tooth in presence of the members.]

Dr. Jas. M. Harris expressed admiration for the article, and hoped it might not disappoint Dr. Townsend's most sanguine expectations, as he thought it promised to be a great aid to dentists; spoke of many teeth sacrificed after being filled with gold or tin, in consequence of inflammation ensuing, which might have been saved, if no pressure had been used in packing the filling; thought the matter of great consequence, and hoped no prejudice might be allowed to influence the decision which should follow a close examination of its merits.

Dr. Townsend—Let me be understood by my friends to be only an experimenter, and perhaps I have only given you one bright side of this

subject; there may be a blackened side, oxydized like the old succedaneum; I have not yet seen it; when I do, I shall tell you. But while I can put a ring around a tooth which has been cut or worn by a spring or band, and after a few hours re-place the band which can be worn comfortably without being affected by the mercury; while I can build up large crowns of teeth on mere fangs, useful for mastication, and find no injurious systematic or local effects, I feel bound in honor and duty to my patients to employ it. Dr. Harris' manner of receiving the subject pleases me. I want my professional brethren to work with me, to assist in building up or tearing down. Don't take hold of it, pinning your faith on my sleeve. If it is a good thing, let us test it and convince ourselves, if it is not, the sooner we know it the better. If it be a truth, it will stand and need no backers—if not, it will as certainly fall. Let me express the hope that you entirely understand my sentiments and connection with this question. I do not, as yet, endorse the use of amalgam, except as an experiment; but time, which proves all things, will prove this.

Prof. Buckingham alluded to numerous experiments he had made with amalgam, which, in the aggregate, had resulted unsatisfactorily; spoke of the action of acids on metals as influenced by proportions of alloy; considered the character of the new amalgam to be greatly influenced by the length of time the superfluous mercury was allowed to remain in conjunction; exhibited specimens, one of which had been amalgamated over night, and the mercury pressed from it on the ensuing morning; the material presented a soft and pasty character. Another specimen, prepared just before filling the cavity, looked firm and silvery; thought, however, (and offered the suggestion as the result of continued observation,) that teeth which were so far decayed as to prevent the introduction of gold or tin fillings had better be removed from the mouth, than be allowed to remain in it. In conclusion, remarked that even admitting this new amalgam to possess some virtue, the harm which would result from its general use, would so far counterbalance the good, as to make its endorsement unadvisable.

Dr. Daniel Neall belonged to the progressive party; was unwilling to condemn anything without a fairer trial than the new formula had received; always stood on the threshold to welcome improvements and suggestions; thought that instead of condemning hastily, it might be as well to convince ourselves by experimenting; desired to know whether Dr. Townsend would fill all frail teeth with the amalgam?

Dr. Townsend.—By no means; such alone as I deem may be saved, but not with gold foil.

Dr. McQuillen had no experience to offer in the use of the article, having filled but one tooth with it, and that was out of the mouth. Before experimenting in it, let alone introducing it into his practice, he desired to obtain all the light he could upon the physical and medical properties of mercury; alluded to the views entertained by Pownes, Turner, Faraday and other chemical writers, that mercury volatilizes to a sensible extent at all temperatures above 70° , but does not oxydize at any other temperature than a little below its boiling point 662° ; dwelt upon the

difference of opinion between writers. Wood and Bache, regarding metallic mercury as inert in its combination with other elements; admitting, at the same time, the possibility of such combination taking place in the system when retained for any length of time. On the other hand, cited cases from Dunglison's Therapeutics, where individuals had unquestionably been affected by metallic mercury; considered the presence of mercury in any preparation intended to be used as a filling for decayed teeth as decidedly objectionable; had reason to believe that in the most perfect amalgam filling, there would be a certain amount of free mercury present, which would undoubtedly volatilize, exposed as it must be to a temperature near 98° ; alluded to the idiosyncrasy many persons labor under where the administration of the slightest amount of mercury is sure to be followed by serious results.

Dr. Githens had filled many teeth with amalgam, but only used it in cases where gold foil could not be employed. Several years since, at the urgent request of a patient, filled a number of teeth with amalgam, which at the time he thought ought to be extracted, and so advised, but overruled, allowed himself, more as an experiment, to use the amalgam, suggesting that in all probability they would last but a few months; saw them five years afterwards, and the teeth looked as well as when the operation was performed. In another case, had preserved certain teeth fifteen years when filled with amalgam fillings; thought that by the use of gold they could not have been preserved as many months; could not understand why in such cases amalgam should be repudiated; never knew of any injury resulting from its use, systemic or local.

Prof. Flagg.—When the article was first introduced into the country, many years ago, had, in connection with his brother, violently opposed the use of it; wrote, he believed, the first article penned in opposition in this country, which was published in the Boston Medical Gazette; had changed his views, and was using the new formula in his practice; inclined to the belief that for such cases as recommended it is invaluable. Some time since saw a case of pyralism supposed to result from the presence of four amalgam fillings; thought, if the deduction was correct, the fault lay rather in the manipulations than in the material, the amalgam having been plastered roughly in the cavities and around the necks of the teeth; otherwise had never seen anything like an authenticated case; thought the stigma attached to the article influenced the opinions of practitioners, which, to say the least, was unscientific; remarked that if an amalgam filling should oxidize, (but which, if properly prepared, it is believed cannot be the case,) a little pumice will soon remove the objection.

Prof. White.—The article as yet is but an experiment; a few months experience could tell nothing about it. The objectionable features of the old preparation being present in the new formula, had reason to believe that a few more months would convince its present advocates of the impropriety of using it in their practice.

Dr. J. M. Harris related cases coming under his observation where the merest shell of teeth had been preserved twenty years by the aid of amalgam; the only apparent objection being the discoloration; hoped

the new mode of preparation would clear it of this objection; believed it would.

On motion, the discussion was continued to the next special meeting, November 20th.

A special meeting of the Association was held at the Dental College on the evening of November 20th, 1855. The President, Dr. Elisha Townsend, in the chair. Members present: Drs. Daniel Neall, Fouché, Pierce, Harris, Du Bouchet, Calvert, McQuillen, Dillingham, Flagg, Buckingham, McCurdy and Garretson.

The President having stated that the subject for discussion was the amalgam question, as continued from the last meeting, requested the views of Dr. Fouché.

Dr. Fouché had formerly been opposed to the amalgam for filling teeth, and up to a few months back never used it, but in the new formula found his objections removed; has been carefully experimenting, and is convinced that in this preparation we have a desideratum long sought, and recommends it to the profession as an invaluable aid in such cases as it is intended to be used; has filled as many as five teeth in a day with it; so far as the short time admits of a proper judgment, his operations have been attended with the best results.

Dr. Townsend desired the grounds of Dr. Fouché's former objections.

Dr. Fouché supposed that pytalism was sometimes caused by the use of amalgam for filling teeth, and again its rapid oxydation; all his fillings of the new formula remain as bright and silver-like as when first placed in the mouth, a period of four months; inclined to the belief that the impurity of the metals used, and their imperfect combination, would be a sufficient explanation of the objections to the former material; the present process of trituration, the complete alcoholic washings, the strict enjoinder to use chemically pure metals, removes these objections as he had convinced himself.

Dr. Du Bouchet had used the material in a single case; saw the filling two days after and it had not solidified.

Prof. Flagg had employed it in 70 cases which he thought desperate; removed only four of the teeth, which were entirely devoid of vitality. Believes, as he stated at the last meeting, that it is a desirable preparation; but, as then, recommends it in such cases, as for sundry reasons gold foil may not be employed.

Dr. Dillingham had tried it cautiously; placed it in many delicate mouths; watched the cases closely, and was most favorably impressed.

Dr. McQuillen had doubts about the correctness of applying the term oxydation to the discoloration that occurs in amalgam fillings. Alluded to the fact that silver and mercury only oxydize at the melting point of one and boiling point of the other; but admitting at the same time, that new affinities might arise in a state of combination. Would offer as a supposition, (not as an assertion,) that the discoloration was due to the affinity that the two metals have for the sulphur contained in the albuminous portions of the food. Cited the blackened appearance of silver spoons when used with boiled eggs; also the tarnish that forms

on silver plate when exposed to the atmosphere; in the first instance a sulphuret of silver being formed from the sulphur contained in the albumen of the egg, and in the second from sulphureted hydrogen present in the air. Was satisfied that the most careful washing could not overcome the affinities that exist between elementary substances, and believed that a later experience would prove the possibility of discoloration taking place in the new amalgam.

Dr. Fouche.—If the discoloration that forms in the amalgam is not an oxyde, then he did not profess to know what an oxyde is. Had noticed that the amalgam was not as good a conductor of heat as gold; and regarded this as an important matter in filling teeth where the nerves are nearly exposed.

Prof. Buckingham could see no particular difference between the so-called new and old amalgams, precisely the same metals being used.—Pure mercury will not oxydize except at a high temperature, but when amalgamated with other metals it is another matter. This amalgam oxydes in preparing it; to wash away which Dr. Townsend uses absolute alcohol. What then is to prevent a similar oxyde from forming in the mouth? Believed it a good thing in its place, but it was evident that its advocates were getting it thus early quite out of its proper position. Thought that in a short time they would discontinue its use.

Dr. Daniel Neall valued the teeth as beyond price; as worthy of having invoked to their aid any thing and every thing promising their salvation. Alluded to teeth which, from peculiar relations, might possibly be saved with something of the kind when they could not be with gold—frail teeth, or peculiarly articulating teeth. Never extracted a tooth when there existed a prospect of saving it. Is in the habit of filling the worst teeth with gold, believing it desirable to run the risk of having afterwards to extract, that we may at least enjoy the consciousness of having made the attempt to save. Would try every thing before resorting to extraction. Thought this amalgam might prove a valuable addition to our pharmacopia, if kept in its proper place; but to place it on an equality with gold would never meet with his sanction. Desired to know whether he understood Dr. Fouche to say that he was in the habit of filling five teeth a day with the amalgam.

Dr. Fouche.—Yes, and large cavities; filling them, as I believe, with greater benefit to my patients than if I had used gold, and with much less fatigue both to them and myself.

Dr. D. Neall.—There is the difficulty—this wholesale use of the article. In my own practice I do not see five teeth in a week I could not save with gold.

Prof. Flagg.—Surprised at Prof. Buckingham's assertion, "that there was no difference between the new and old formula;" as in the old we had copper, lead, bismuth and other alloys, while in the new we have the pure metals. Remarked that three years had proven the unchanging character of the new formula. Thought that pecuniary consideration should be taken into account. Did not know how it might be in the practice of others, but in his own could often save desirable teeth, where the patient could not afford the expense of gold. Asked if, in such

cases, the teeth should be suffered to decay without any attempt being made to save them ?

Dr. Pierce.—Would Prof. Flagg prefer the amalgam to tin foil ?

Prof. Flagg.—Decidedly.

Prof. Buckingham.—As professional men, the question of dollars and cents should never be allowed to stand between us and the patient's best interests. The question should not be presented on such grounds, but only in connection with its merits and demerits. If we consider gold the proper material to be employed, then I think we have no right to use any thing less valuable ; but tin foil had better be used than this amalgam because we have nothing to fear from it, at least in the shape of an oxyde.

Dr. Townsend.—With regard to the prejudices existing against the article, inclined to believe it resulted from amalgam generally being found in company with bad teeth ; teeth that never should have been filled, and again from its being very much employed by quacks ; yet, even in the hands of such persons, had known teeth to be saved for years. Considered that there was sufficient difference between the new formula and the old to remove all objections to its prudent employment. The mass being homogeneous, no lead or other impurities and no oxyde, as that which forms in trituration, is removed by the alcoholic washings. Dr. McQuillen's views relative to mercury only oxydizing at the boiling point, is incorrect, as any one who has prepared bluemass can readily assert. As Prof. Buckingham condemns the amalgam so much on account of the oxyde, would ask if he had never remarked the same result in gold fillings.

Prof. Buckingham.—Often, but the discoloration that occurs under gold fillings and oxydation, are two things.

Dr. Harris had remarked in his practice, one case where pytalism seemed likely to result from the use of amalgam in filling teeth ; would state the case, that the members might judge whether the fault lay in the materials or in the manipulation. Eighteen teeth had been filled ; the material had been plastered not only in the cavities, but about the necks and margin of the gum, making as it were a mass of teeth and amalgam. The cavities seemed to have received no preparatory treatment, and certainly no attempt had been made to finish up a single filling.

Dr. McQuillen.—Notwithstanding all that had been said in favor of the article, and the fact that one operation he had performed in the mouth promised favorably, felt a disinclination to introduce it into his practice. Freely admitted that he had never seen a case of pytalism resulting from the presence of amalgam fillings ; supposed the limited use of the article since his entrance into the profession would account for that. Had, however, every confidence in the judgment and veracity of Prof. Harris, and other writers who assert positively that cases have come under their notice, not only of pytalism, but extensive absorption of the alveoli, induced by the presence of amalgam fillings. As the active agent that brought about the trouble in these cases was present in the new formula, he could not but regard with misgivings its reintroduction to the profession.

On motion, adjourned.

A stated meeting of the Association was held at the Dental College on the evening of December 6, 1855. The President, Dr. E. Townsend, in the chair; usual number of members present.

The principal item of interest was the report of the Committee on Sponge Gold, which was adopted and committee discharged.

REPORT ON SPONGE GOLD.

To the Pennsylvania Society of Dental Surgeons :

GENTLEMEN :—Your committee appointed to test the value of sponge or crystal gold as a filling for carious teeth, would respectfully report :—That from all the knowledge they can gather from the experience of members of the profession, and also from the experience of the committee, they do not consider it advisable to recommend it to the profession as a reliable or safe material for filling teeth. With *one* exception, your committee is unanimous in their determination never to use it in their practice; one of the committee thinks he may use it in some cases, where it would be used to fill out or patch a foil filling, and where it would not come in contact with the bony parieties of the cavity. No time, labor or expense is saved to the operator.

The amount of pressure necessary to make an apparently good filling of crystal gold, is greater than is needed for gold foil; and all, even its warmest friends, admit it takes more time. If a more perfect and enduring filling was made by this extra labor and time, your committee would deem it time well spent, but this has not proved to be the case; the fillings placed by your committee have, in nearly every case, been removed, and the teeth re-filled, in consequence of the imperfect condition in which they were found after a lapse of only a few months. The edges of the fillings in some cases crumbled and admitted moisture freely around them; in others, the teeth were very much discolored around and under the fillings, the discoloration being so great as to demand the removal of the filling. Your committee have the report of some gentlemen who seem to have succeeded in making very perfect fillings, which so far stand the test of time and wear of the very material which the manufacturers admit to be a bad article, and which they wish returned to them, that they may furnish a better in its stead. The only difference between that furnished two years ago and the present preparation, seems to be a property of greater adhesion; in all other respects it is open to the same objections as the earlier specimens. With these views, your committee cannot recommend the *present* preparation of sponge or crystal gold for filling teeth, if the object aimed at be their preservation for a series of years. All of which is respectfully submitted,

E. TOWNSEND,
J. D. WHITE,
J. F. B. FLAGG,
T. L. BUCKINGHAM,
J. H. McQUILLEN,

F. REINSTEIN,
CHAS. A. DU BOUCHET,
JAS. M. HARRIS,
DANIEL NEALL.

"A WORD WITH THE DOCTORS."

Dr. Pease, in the January number of the *WESTERN LANCET*, in an article headed "*A Word with the Doctors*," says:

A few years since, dentists and physicians occupied nearly the same ground in the treatment of the teeth. There were but few instruments, and they were illy adapted to our wants; and there was no pharmacopia belonging to or generally used by the profession. The dentist was synonymous with the manufacture of artificial dentures; he did little more than extract aching teeth, or, if he attempted to arrest disease by plugging, it was often so imperfectly done as to be but little more than of temporary value—deferring the loss of the teeth but a few years.—When caries had penetrated to the nerve, the tooth was beyond his resources. If we consider the amount of disease that occurs low down on the approximal surface of the teeth near the gum, where it is masked or difficult to discover, even when the health of the teeth is a matter of care, and that, in those places, there is but a comparatively thin portion of bone for disease to traverse before reaching the pulp—while the accelerating influence of decomposing food on caries is here the greatest, the great loss of the teeth will be apparent, especially of the molars and bicuspid, and the necessary amount of mechanical dentistry, where so large a proportion of the teeth are liable to so common and serious a disease, and that disease is incurable. Dental statistics, so far as they have been tabulated, show that the great loss of the teeth is in early life, before the system becomes consolidated, or soon thereafter. It is not uncommon, for the first permanent molar, which cuts at six years of age, to be so diseased as to be beyond remedy at nine; and the other permanent teeth often as rapidly follow. Thus, in some 1300 permanent bicuspid and molar teeth I extracted consecutively, 32 per cent were extracted from the mouths of persons under twenty-five years of age, and 31 per cent under thirty, and a considerable per cent of the remainder was for persons under twenty years of age. If, in addition to this, the large number of teeth plugged for persons under thirty years of age is taken into consideration, the frightful amount of disease in early life will be apparent.

The following remarks in relation to Mechanical Dentistry are very appropriate:

The prevalent opinion among physicians, which has spread from them to the community is, that dentistry is purely mechanical, that a man, who can make a set of teeth, is a *dentist*, and that in *that* consists the chief skill of dental practice. Physicians by their action as a body, and individually, are responsible for much of the public estimation of dental ability, and the value attached to many operations; viz: the weight of the profession has always been in favor of extracting aching teeth. Caries has penetrated to the nerve of a tooth without burrowing much, or undermining the enamel; the cavity is merely a tube, the strength of the tooth is not much impaired, but the tooth aches; without the intervention of dentists the rule would be to extract the tooth;

yet by destroying and removing the nerve, the tooth may be made valuable for a period of time if not for life. After the tooth has been plugged there is, perhaps, tenderness at the apex of the fang, possibly absolute pain. The physician cries ulceration! ulceration! foreign substance! dead tooth! it must come out! and so impresses the patient, that it is difficult to disabuse him, and make him believe the difficulty is only temporary, with little likelihood there will be more than a passing irritation, arising from the efforts of the overtaxed absorbents to remove some remaining particles of the dead nerve. Instead of helping nature by stimulating the action of the absorbents and keeping down irritation, he adds fuel to the fire by hot preparations, yet often after a deal of grumbling the tooth gets well in spite of him. Thus the physician creates a public opinion unfavorable to treatment of aching teeth—to conservative dentistry in general; and then because that public opinion demands mechanism, he calls us mechanics, and mechanical dentistry: thus fortified, like Jonah's gourd, swallows up the conservative. It is not strange that mechanical dentists, conscious of their own fate, should, like monarchs, seek to perpetuate their succession and avail themselves of the proclivities of the physician in their favor. Toothache with them is an ugly customer, and plugs do not pay; so they adopt the maxim, that extracted teeth, like dead men, tell no tales; while inserting teeth is a palpable, attractive, walking advertisement, and they now have their sign board in the shape of artificial dentures in the mouths of half of the women in fashionable society. In contrast with them, here and there, scattered through the land, are a few quiet individuals, patiently studying the physiology and pathology of the mouth; carefully making experiments and noting the results. Emboldened little and little by success, they have progressed till they feel competent to preserve a large class of decayed teeth for practical purposes. But, unfortunately, the way has been barricaded against them, the community are prejudiced against large plugs, and the weight of medical testimony is against them. The mechanical dentist fortifying himself, inserts none, and for the small plugs he does insert, he charges so low, that no one can make a business of plugging teeth, and thus acquire the skill resulting from constant practice and concentrated attention to it, to say nothing of the more difficult classes of teeth, and live. With few exceptions good pluggers are found only in cities, and then often but a few individuals, who are obliged to eke out a living, or look for their greatest profit to their workmen in the laboratory. I have frequently asked the most accomplished pluggers how many plugs they could insert in a day; they have generally answered, about eight, (a mechanic will insert 20.) Now the ruling price throughout the northern States is for gold \$1 per plug, for tin, 50 cents. Tin is often inserted in large and difficult cavities on account of economy both to the patient and dentist, and consequently demands more labor, making the average receipts of the honest, skilful dentist respectively 4 and 8 dollars, according to the material. The greater cost of the gold often makes tin the most profitable, so that practically, the man who brings to the profession an education worthy of it, and of a professional man, must

furnish an office, provide an expensive set of instruments, and, if he confines himself to legitimate practice, subsist on hod carriers' wages; unless he is fortunate in having liberal friends.

"HUMBUGIANA:"

"BY ONE WHO HAS BEEN SOLD,"

Is the title of a very florid article in the January number of the DENTAL REGISTER.

We like candor and a plain and concise statement of facts, even if a man is compelled to acknowledge to a "sell;" but we dislike superfluous language, as, when we are sweltering under a burning sun, to hear a man say, "It is clear to-day," or when the rain just naturally pours down, and the streets are flooded and we are drenched, to have our attention called to the fact that it is "damp out."

Now it was perfectly superfluous for the writer of said article to tell us that he had been sold, for it is *the* palpable *fact*, and we are happy to inform this artist that his picture is so perfect, that he might have saved himself the trouble of following his illustrious predecessor, who, when completing a picture, felt compelled to write over it, "*This is a horse.*"

A man may be sold, but the sell depends always on the credulity of the one sold. A man may take the simple statement that a saw will cut, and buy a *handsaw* to *bore a hole* with, and when he finds it rather difficult to do, say that he has been "sold," and find fault with the vendor for eulogizing its cutting qualities.

But let us look at the picture. He says:

"Ever and anon, in perusing our public journals, our vision is almost blinded with flaming advertisements of great discovery.

"Dr. A., who has been experimenting for over three years, expending a fortune and valuable time, has at last made the wonderful discovery which will entirely do away with former discoveries, fixtures and appliances—give satisfaction beyond a cavil to patients, and make the operator independently rich. * * * *

"All this meets our eye at a glance, before the public are aware of the existence of Dr. A. or his wonderful discovery, without our even dreaming of the good fortune in store for us." * * * *

It is plain, from several (we presume) intended coincidences, that Dr. Slayton and Gutta Pereha are in for that last brick, although the writer is as incog as the foe of "Billy Patterson."

Some one has said, in substance, that "a wish or desire or expectation is sometimes father to the thought."

Now, where did those visions of wealth, arising from magical dentistry, come from? Did they come from any statements of Dr. Slayton? Could they be deduced from anything that any leading journal has ever published? If not, we must conclude that they arose, with all their "*vision-blinding*" effect, from a more feverish spot than the page of any "leading journal." We are aware that the *watchers* for the great *burn up* of "Father Miller" or the earnest listeners for that *horn* were not more eager in watching the signs of the times than are many in our ranks for the time when some discovery shall be made that shall take from dentistry all its back-breaking labor and substitute a sort of "presto change" practice when a *wish* shall become the *executor* of a *thought*. In other words, Dentistry made easy. But we fear that time will never come, and that hard work and faithful Dentistry will always be one and inseparable.

In Dentistry there is no universal specific—no machine duplication—no catholic order of style or adaptation. One great mistake in our profession is in our periodical "*hobby-riding*."

To-day we adopt "atmospheric plates," and every thing must ride an "air cell;" to-morrow we make "block work" we "block" every thing. Next we attempt "continuous gum" and platina rises. Then gutta percha is tried and every thing else for artificial work is thrown aside for it. This seems to amount to a sort of mania, and, although a difficult disease to manage, we will propose a remedy which is, to dress the patient one day in boots alone, the next in gloves, and the next in hats, and we think by the time he gets to the shirt he will be cured and come to the conclusion that no one article will answer for all adaptations.

Gutta Percha may be a humbug in some hands; it certainly will if men are "almost blinded in vision" by any very golden hopes or glorious dreams arising from its legitimate use.

To us it forms a very useful adjunct to practice in artificial work, and instead of a golden harvest for our exchequer, we find that it takes from seventy-five to one hundred dollars from our pocket in almost every case, for we have always charged and received full price for temporary setts, and now we charge only half that price for gutta percha.

Thus far we are free to say that the use of this substance as a base for temporary setts, has proved all that has been claimed for it, and has afforded us great satisfaction.

As to the business arrangement we have very little to say. Our opin-

ions and acts are pretty well known in regard to dental secrets, patents, &c. We have never seen cause to change, except in one particular, which is to make a distinction between mechanical appliances and surgical or therapeutical practice.

In neither department could we be induced to obtain a patent, but if one is offered that we desire and think useful and of benefit to our patients, we intend to obtain it and not quarrel with the vendor. If, however, we consult mere taste in the affair, we had rather pay a man for instructions alone than the purchase of a patent.

But if we want either we expect to pay for them, as we do for teeth and other material necessary to our practice.

DENTAL PERIODICALS.

We have received the January number of the News Letter and Dental Register and the December number of the Record, all containing interesting matter, as usual, but our subscribers, we wish distinctly understood, are "reading men," and before we could place this number in their hands would have read the original issue. The fact is, we are getting a little jealous of the two last named for they are swelling out into aldermanic proportions while we belong to the lean host and have no faith in "cod liver oil" in the case.

Well, we must be content with the truth (which is always good enough,) although it may hurt to tell it: but the truth in this case, is, we had no more to say this time.

NEW YEAR'S GIFT, (ALMOST.)

"Gems of beauty," pearls of grace,
With rosy lips and smiling face,
When jewelled with an artists skill,
Our best conceit and eye shall fill.

We cannot allow our friend, the editor of the Dental Register, to have all the fun to himself over *those teeth*. We, too, have received a package (we would have given five dollars per tooth for eight of the lot ten days sooner,) of teeth. They came, too, "very opportunely." We also "hailed it as a very auspicious omen for the year 1856," notwithstanding a small memorandum at the bottom of the box of forty-six dollars, (unpaid.) We have been more fortunate than the Doctor for we have

been in the studio at 116 and we can corroborate his supposition that there have been "sitters" there, in fact, we heard them polishing the gems in one of the rooms by pouring perfect floods of sweet notes over them. Who couldn't make teeth and gums, too, under such circumstances? But the great point is, Jones, White and McCurdy have been studying comparative Anatomy successfully. McCurdy was seen last summer on a small island at Niagara, hunting for the teeth of the animals that were said to have inhabited it in such numerous quantities as to impart a name. Jones was found hunting "saurians" up at Saratoga.

What White was doing may be inferred from his late productions. Now he always did make a good masculine tooth, but the last lot have some of the most feminine teeth we have ever seen, and we could not help thinking "what a blunder it would be to place such teeth in any thing but a delicate lady's mouth." We have had plenty specimens of teeth in close imitation of the herbivorous and carnivorous animals, but we now have not only good imitations of the omnivorous, but of the different shading off from highly animal to intellectual; from the short, strong crown of the masculine to the well rounded, long crown of the feminine, or even of voluptuous contour such as are so warmly described by our friend, the Doctor.

Hyde & Goodrich, corner of Canal and Royal streets, keep them constantly on hand for sale with numerous other articles for Dentists.

CHEVALIER'S MISTAKE;

No, we mean *our mistake*, or the printers, which made us head his advertisement Chevalier's Catalogue.

Mr. Chevalier publishes a catalogue of Dental instruments, materials, &c., which he will be happy to send to any address, but the printer copied too literally from its title page. Dentists will find his assortment and facilities very complete.

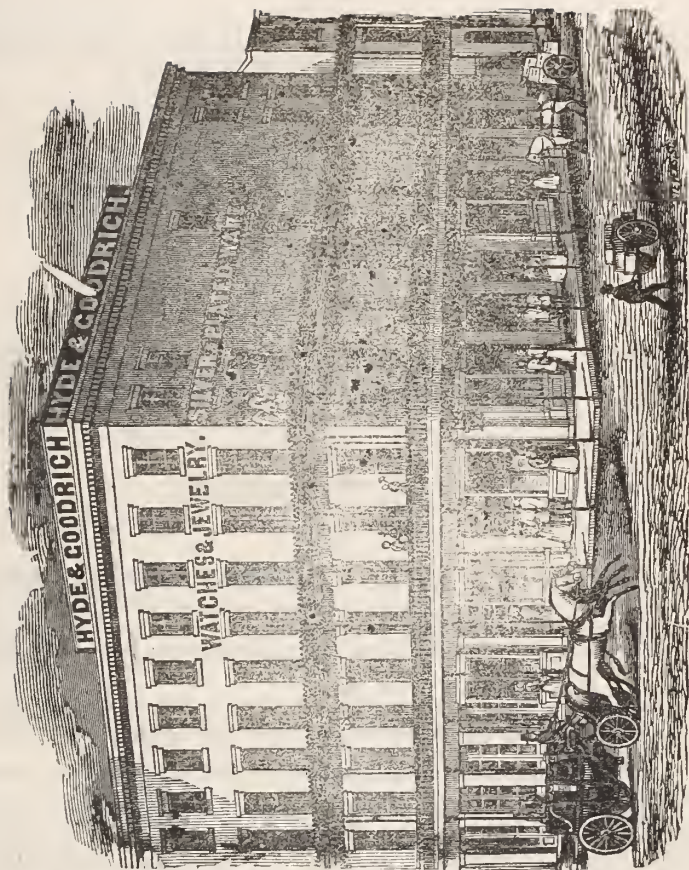
CORRESPONDENTS.

We have a pile of letters from our professional brethren in regard to the Obturator, and were it not for our well known weakness (excessive modesty,) we would make copious extracts for the pages of the aforesaid journal. Suffice it to say, that they are all highly commendatory of

the course pursued and designs offered, and form altogether one of the most pleasant features of the undertaking.

To gain the praise of a swaying, vacillating crowd, might give pleasure for the moment, but would prove as ephemeral as the tastes and impulses that govern them. But to receive marks of approbation from those whose friendship is at all times worth possessing, and to know that they come through the silent workings of "second thoughts" is a substantial pleasure. This pleasure has been ours, and we have but one anxiety on the subject, which is, that we may henceforth be worthy the continuance.

This number closes the first volume, and we shall commence the next with firmer reliance on the success of the work, and, although the labor is more than can be known without the experience, still we shall continue the attempt with cheerfulness.



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By a course of continual experiments, and conference with the Profession, as to its needs, this article has recently been brought to a degree of perfection which renders it indispensable to every Operator who becomes in the least experienced in its use. Its adhesive and plastic quality, and perfect freedom from crumbling, now leave nothing to be desired in this respect.

Since its first introduction to the Profession, it has been very generally, and, in many instances, exclusively adopted by the first operators, whose continued experience demonstrates,

1st. That it requires for its successful use peculiar tools, combined with a peculiar system of manipulation.

2nd. That it requires skill to use it, repaying even the highest degree, by producing results heretofore unparalleled in beauty and permanency.

3rd. That after proper experience on the part of the Operator, it may be used in all cases where foil could be used, and in many cases where foil could not be used at all; and in every instance with the most complete success.

4th. That after all the changing influences of time, the action of the fluids, or secretions of the mouth, the effects of heat and cold, or the continual friction of mastication, stoppings properly made of the Watts' Gold remain in all respects *permanent in their character*. They do not absorb the fluids, nor break up, disintegrate, soften, dissolve, become porous, or in any respect change their nature or condition.

5th. That by it a large and important class of frail teeth, hitherto deemed beyond the reach of art to save, are restored to health and permanent usefulness.

6th. It has been demonstrated by absolute experiment that the Watts' Gold, which is necessarily *pure*, may be so consolidated in the process of filling as to be one-fourth harder than melted gold or the most skillfully packed Gold Foil, and even harder than twenty carat condensed gold coinage.

7th. It clearly demonstrates that its use will open a new and inviting field for skillful enterprise; and while it calls out and cultivates a higher and continually augmenting skill, it abundantly repays with an ever increasing ratio of success, producing results hitherto unattained or even anticipated, by the Profession.

It is put up in one-eighth ounce boxes, containing directions for its use, and can be mailed to any part of the world.

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July, 1855.

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ORUM & ARMSTRONG'S IMPROVED CURVATURE GUM TEETH.

GOLD FOIL, &C.,
DENTAL DEPOT,
No. 114 ARCH STREET,

CHARLES L. ORUM.
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DENTISTS' MATERIALS.

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TEETH.

Plate Incisors, - - per hundred, \$	Gum. - - per hundred, \$
" Cuspidati, - - - "	" - - - "
" Biscuspidi, - - - "	" - - - "
" Molars, - - - "	" - - - "
Pivot Incisors, Biscuspidi, and Molars.	
ORUM & ARMSTRONG'S GOLD FOIL, ORUM & ARMSTRONG'S TIN FOIL	
Abbey & Son's - - - per oz., \$	William Barrats - - - 50 cts.
D. Morgan's - - - "	G. Kearsing's - - - 45 "
Gold Plate full 18 carat. cut to pattern, - - - - - per dwt.	90 cts.
Gold Solder, 18 " - - - - - "	90 "
" 14 " - - - - - "	75 "
Silver Plate cut to pattern, - - - - - "	8 "

☞ All orders inclosing the CASH will be promptly and carefully attended to.

RECOMMENDATORY NOTICES.

Messrs. ORUM & ARMSTRONG:

GENT.—Having a perfect knowledge of the material and mode of manufacture of your improved Patent teeth now offered to the profession, I have no hesitancy in pronouncing them superior in every respect to those made on a different principle.

They stand any requisite amount of heat in soldering are not absorbent in quality and present a truly natural appearance, adapted as they are to partial and complete sets, their qualities together with firmness in withstanding pressure have induced me thus publicly to approve their excellence. I do most cheerfully recommend them to the profession.

November 1st, 1855.

Truly yours, JOSEPH E. McILHENNY, D. D. S.

GENTLEMEN:

PHILADELPHIA, April 3rd, 1854.

I have tried your improved Gum Teeth, and cannot but express the high gratification I have felt at the beauty of the articles and the ease with which they can be adapted to the plate.

I have just finished applying them to a plate, and it occupied scarcely a moiety of the time required by those manufactured in the old style, and their appearance was so much superior, that it would be absurd to institute a comparison.

I consider Gents., that your approved teeth are eminently worthy the patronage of the profession, and it should feel gratitude to you for rendering their labors easier, while the finish is so much superior.

Yours, truly, R. T. REYNOLDS.

To Messrs ORUM & ARMSTRONG, Phila., Pa.

Messrs. ORUM & ARMSTRONG:

St. Louis, Mo.

I have just finished and placed in the mouth a full upper set, using your Improved Style of Gum Teeth. They give me entire satisfaction, and I can cheerfully recommend them to the profession. The curvature of the Gum is an undoubted improvement, and as it always gives me pleasure to advance our art, I shall take every opportunity of introducing your new teeth to the notice of my brethren in the profession.

I remain, Yours &c.,

C. W. SPALDING, D. D. S.

THE N. Y. TEETH MANUFACTURING COMPANY,

No. 404 BROADWAY, N. Y.

Manufacturers of Teeth, Foil, Instruments, Files, Lathes, Chairs, Spittoons, Corundum Wheels, &c., &c., and dealers in every description of Dental Goods.

We offer to the Profession an *immense* assortment of sizes, forms, and colors of Teeth, consisting of the usual curvature styles. Our improved curvature, Thick Gums, for restoring the contour of the lips and face, Front Gums, in sections of three teeth. Gum, Molar, and Bicuspid, in sections of two teeth; also the usual style of Gum Teeth, of improved forms and in almost endless variety.

Plain Teeth, of every size and description; Pivot Teeth; also a large variety of sizes and forms for continuous gum work; together with the entire assortment formerly made by Dr. James Alcock.

To those unacquainted with the Company's Teeth, they offer the following recommendations:

"The undersigned have used the Teeth manufactured by the N. Y. Teeth Manufacturing Company, 404 Broadway, N. Y., and they take pleasure in recommending them to the Profession, as combining all the essential elements of good teeth, in a superior degree; viz., successful resistance to the action of fire, in single and repeated heating, great strength, clearness or translucency, beauty of form and coloring, and adaptation for setting."

Dr. George E. Hawes, N. Y.
 " A. W. Brown, N. Y.
 " R. P. Cook, N. Y.
 " S. H. Twitchell, Williamsburg.
 " B. Howe, N. Y.
 " Wm. C. Bennett, N. Y.
 " S. J. Dorrance, Newark, N. J.
 " Peter Stanbrough, Newburg.
 " John M. Howe, N. Y.
 " J. S. Clark, N. Y.
 " Geo. Smilie, N. Y.
 " C. S. Putnam, N. Y.

Dr. John Allen, N. Y.
 " Wm. Mead, Newark,
 " E. Henry, Savannah, Ga.
 " C. W. Grant, Newburg,
 " J. C. Duell, Amsterdam, N. Y.
 " F. B. Abbott, Derby, Conn.
 " Lyon Bernhard, N. Y.
 " E. Ware Sylvester, Lyons, N. Y.
 " Wm. Cross, Rhinebeck, N. Y.
 " Alfred Goodell, N. Y.
 " T. B. Gunning, N. Y.
 " L. G. Bartlett, Ithica.

Dr. Durkin, New York.

We select a few of the many recommendations received by letter:

"The Profession have only to use your Teeth to be satisfied of their superiority.
 "HIRAM M. SHAW."

"Dr. Stranbrough is in ecstasies over your Teeth, and says Dentistry is very greatly advanced by your doings.
 "C. W. GRANT, Newburg."

"Our customers are very much pleased with your Teeth, and we can sell a great many.
 "B. S. CODMAN & Co., Boston."

"Our Dentists seem much pleased with them.
 "CARLTON & HOVEY, Lowell."

"The New York Teeth Manufacturing Company have now on hand a fine assortment of Teeth, of a perfectly natural form when mounted, which are made expressly for the style of work known as Continuous Gums. They are made in sets, including molar and bicuspids, and of such form upon the grinding surfaces as to produce a perfect articulation, without marring the beauty of the Teeth by grinding."
 JOHN ALLEN.

Orders will be filled without delay by the Actuaries of the Company, who are experienced in the practice of Dentistry and sale of Teeth; consequently Dentists may rely upon having their Teeth selected with strict regard to description and the requirements of each case.

Respectfully,

SOLYMAN BROWN, }
 CHARLES S. MILES, } Actuaries
 JOHN M. CROWELL, }

CHEVALIER'S
DENTAL INSTRUMENTS,
Operating Cases and Chairs,
PORTABLE LATHES AND HEAD RESTS,
TEETH,

Gold and Tin Foil, Gold and Silver Plate and Solder,
AND EVERY OTHER ARTICLE USED BY THE DENTAL PROFESSION,
SENT TO ALL PARTS OF THE WORLD.

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MANUFACTURERS OF
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Orders enclosing cash solicited, and the Foil will be promptly despatched by express, mail or otherwise, as directed.

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GOLD & TIN FOIL, GOLD PLATE, &c.
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**IMPROVED UNDER MOUTH CUP,
FOR PLASTER IMPRESSIONS.**

Manufactured at Newark, N. J.,

BY

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DENTAL INSTRUMENTS.

The subscriber has withdrawn from all connection with all other Depots for the sale of his well-known Instruments, and hereafter J. M. LAIRD, of the Porcelain Manufacturing Company, will be my only agent.

All orders for Instruments must be addressed to

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CHAS. E. MORSON.

THE DENTAL OBTURATOR.

VOL. II.

JUNE, 1856.

NO. I.

OBTURATOR CHIPS.—NO. 4.

In the year 1840 a Dentist called on us, with a plaster cast, for the purpose of selecting a few teeth for the case, and at the same time apologised for exhibiting so rough a cast to our inspection, and said it was prepared in a hurry and that "he usually prepared them with more care."

Now said cast was cut, carved and even polished down to a good imitation of the wandering *statues* of traveling Italy. Even the undulating waves of rugae were smoothed down to the delicate surface of a modern bust of a Venus. From that time we have been afflicted with a peculiar stubbornness in taking impressions and obtaining casts, and have taken particular pains to get them with all the rough angles that plastic wax or creamy plaster could get. In other words, we do not "trim" much.

In the memorable year 1855, we conceived the immense idea of taking impressions of our profession, and as our practice has much to do with articulation, (not technical) and as palatine fissures were one great cause of "lapsus linguae," we had the metallic assurance to offer from our "impressions" the "OBTURATOR," which every Dentist knows cannot be adjusted without very accurate adaptation to all the irregular shapes presented.

Having undertaken the task, we have but one guide, which is to follow undeviatingly our "*impressions*." Leaving the patient, then, we enter the laboratory for materials which we have gathered through the assistance of that "*Triumvirate*" that "*came, saw and conquered*,"—"the *American Society of Dental Surgeons*," "*The Baltimore College of Dental Surgeons*, and the *American Journal of Dental Science*"—three heroes, that "*came*," "*saw*" and with heart and hand as true as ever bore mortal weapon, entered the conflict.

One opened a fountain and turned the healing rivulets through its sculptured mouth.

Another established the paternal council, whose maternal fireside was at once the home of the sage and the depository of his gleanings on his weary pilgrimage.

in Dentistry assailed. As we have said elsewhere, a man's attainments will be in some good degree commensurate with his ideas of the nature and importance of the thing to be accomplished, and if our young men are to be taught that Dentistry is a trade, and that they can be fully taught, furnished and equipped, by a short initiative process, they will undoubtedly go out as mere tradesmen, save here and there one who finds out that four or five years' practice convinces him of the fallacy of such conclusions, by establishing in his mind the conviction that he really knows very little.

The time will come when our profession shall rise by works that shew the principles, that nerved the arm and filled the heart, when the "triumvirs" with a host of followers shall wreath a chaplet of unfading honor not around their brows, as conquerors who sit down satisfied that they have reached the goal of their highest ambition, but their ever-green shall twine around a nation's pathway, a nation as progressive in science as in intelligence, and the watchword of both shall be *Onward*.

"The American Society has finished its task. * * * It is doubtless best that the Alma Mater should quietly retire."

Prominent among the founders of this, first national society, we find side by side with the venerable Hayden the name of Solymon Brown, and it is refreshing to read his defence of the principles, use and utility of that body; and the enthusiasm that nursed the hope that it would "endure as long as this Republic," is alike creditable and entitled him to a seat beside the worthy founders who received the thanks of the profession and the congratulations of the co-laborers in this and other countries.

We will not stop to cull from the archives of this Society the many evidences of enthusiasm therein contained, but pass to a more unpleasant task. History bears no darker stain nor humanity a more humiliating remembrance than that of matricide. Yet here is the hearth stone of the noble, the honored, the poet, the "old man eloquent" of the past and present. Here is the maternal step trembling with age whose very weakness ought to be her strength, and here in this the household of her children, sire and spouse, goes up the cry—"She has accomplished her task and it is best she should quietly retire."

So has the Goddess of Liberty accomplished her task and shall her noble sons strangle her in her own Temple? Shall we say that this age of "*progress*" is to sweep away all the creatures of circumstance? Shall this progress sweep away the sacred relics of the nation's birth? her Plymouth Rock, her Independence Hall and the home of her Washington?

Will the sons and daughters of Liberty "*progress*" so far as to allow their "gentle Goddess" to fade into the semblance of an old way-worn pilgrim, who having "*finished her task had better quietly retire.*" The Goddess of Liberty lives in our hearts in immortal *youth*. Why fades the green wreath that zealous hands placed on the brow of our national *Alma Mater*? and why stands she now forth in the withered garniture of the opening grave? Simply because they who solemnly promised to *cherish, love and protect* have neglected her. Other loves have filled their hearts. In other days their willing feet turned with alacrity to her halls. Now she is wholly neglected by those who were loudest in her praise. She may have been the creature of circumstances. So was the compact that, entered into by the old thirteen States established a nation's Republican Independence. Both were found amply adapted to the circumstances that called them into existence, and both are to-day as well adapted to the condition of "*progress*" as they ever were, and if the founders of the American Society possessed the vitality that they professed in the days of her prosperity, she would stand forth in the semblance of a *youthful Goddess* crowned with honor by being the almoner of good to the *whole profession*. It will not do for them to shuffle off the responsibility in this matter, for the profession hold them vitally responsible for the present condition of the American Society, for if they had carried out the principles so eloquently set forth in their Declaration, the American Society would now have been the strength and pride of the Dental Profession.

CYLINDER FILLINGS.

BY JAS. S. KNAPP, D.D.S.

The subject of gold in cylindrical form has, for three or four years, engrossed a portion of attention among the thinking minds of our profession; and it is one which, from results attained, is not likely to receive more than its share in thought or practice.

Nearly all are agreed as to the requirements of a plug; that it should arrest the progress of decay in the tooth: at least that that is the object and aim of plugging teeth—and that to do this, certain things are necessary: a degree of hardness in the plug, the perfect adaptation of the

pure *dry* gold to its cavity, which, having been *well* prepared, must be filled to its very orifice, and no more, with a degree of finish upon the plug and its dental margin—all intended to answer the desired object.

If it be acknowledged that some finely organized teeth have not only stood the test of slow decay, but also of very imperfect operations for many years, none will deny the duty of the dental practitioner to do, in every case, the best that his skill can perform, or that he is in danger of investigating too much any particular method of using gold, the advocates of which claim is capable of being used to as great, if not greater, good than any other.

Many have already witnessed the results alluded to attained by cylinder fillings from several of the profession; and from the importance of the general subject we may be allowed to digress a little to touch upon the history of the use of gold in the form of cylinders.

In the summer of 1851, I saw a letter from Dr. J. S. Clark, written at St. Louis, to his associate, Dr. Geo. J. Friedrichs, in this city. In that letter he alluded to a course of experiments which he had pursued, gave the principal items and their results, and promised further to illustrate to Dr. Friedrichs and myself the manner of cylinder fillings, and the reason why he was so sanguine of doing better operations than he had ever before been able to do. This promise was soon afterwards so well fulfilled, that, though wedded to the old style of operating first taught me, I was induced to make the change in the method, which I have never seen cause to abandon or regret.

I had heard that Dr. F. H. Badger used cylinders, and had, a year or two before, seen some gold prepared in that form in his office, and I supposed that Dr. B. made the *entire* plug of cylinders. I retained that impression till the summer of 1852, when in a conversation with him, shortly before his departure from this city, he assured me he did not make the entire plug of cylinders, and only used them after mainly filling the cavity with gold folded and cut in the form of ribbons or strips, introducing one, two, three or more small and hard cylinders as a hole could be successively made to receive them with a plugger having its point tolerably sharp. He then further hardened, filed, cut, burnished, &c., upon the surface of the plug till it was reduced to a level with the tooth, and finished, till it and the margin of the tooth were well polished.

Dr. Clark has publicly, in the April (1852) No. of the Dental Register of the West, given that distinguished operator credit for "the intimation of cylinder fillings."

Dr. Badger also kindly described to me his method of making cylinders, which is also to be found in the Am. Journal, vol. vi., No. 1, page

23, and, as will be seen, is quite different from that of Dr. Clark, found as above.*

As he mentioned that he had been misrepresented as using cylinders for making the entire plug, and does not claim that which some ignorantly claim for him, it is but just for me make these remarks and merely to add that those who represented him as using gold so exclusively in the form mentioned, were doubtless not aware of the comparatively little use he made of cylindrical gold.

It matters not, however, in what form gold is used, provided the proper result be attained, and no one acquainted with Dr. B's operations will question their excellence. For his kindness and courtesy to me, I was, am and ever will be, truly obliged.

However much one may admire operations performed by a very few of those who use gold in the form of strips, rope, or pellet, most of our profession will be willing to acknowledge that there are, at least, an equal number of those who use cylinders whose operations will compare favorably with the most successful operators in other forms of gold, and when we think of the short time the cylindrical method has been in use, and the results which have followed the persevering efforts of even young practitioners, we are greatly inclined to give the preference to this method.

A proof of what I say in regard to what some few young Dental Surgeons have accomplished in way of plugging teeth with cylinders is

* In order to show the difference between the mode of Dr. Badger and ours, we refer to facts.

In the article alluded to in the American Journal, No. 1, page 23, Dr. Badger, in speaking of one of his most difficult cases, says he "made the cylinder by folding the strip of gold endwise upon itself until it could be folded no longer, and then rolled it in the palm of his hand with his fingers. * * * It was then forced through a smooth hole in a steel plate a little too small to allow the burr (the instrument with which he cleaned out the cavity) to pass through, in order to insure its ready entrance into the cavity it was intended to fill, then *annealed* and placed conveniently for use." After drying the cavity, "the pellet was caught in the tweezers, carried back and introduced into the cavity and pressed home with a flat instrument. A curved instrument was then selected with a tolerably sharp point, with which the *pellet was forced through its center to the bottom.* * * * The opening was then filled with a suitable pellet," &c.

To show the want of similarity it is only necessary to say that with cylinders such as we use, this manipulation is *SIMPLY IMPOSSIBLE*. A cylinder rolled merely tight, without any hardening between the finger and palm, then forced through a wire plate, enough smaller to require force to put it through, then annealed and placed in any cavity of *even its exact size* cannot be pierced through as Dr. Badger has related of his by *any power in the hand of man or strength in any curved instrument*. It may be drilled but not pierced and opened.—EDITOR OF THE OBTURATOR.

readily observed and admitted by all who take the trouble to see and examine for themselves.

That plugs wanting in the principal qualities to ensure success have been made and will still be made, with cylinders, as well as by other forms of gold, by careless operators, is a fact as true as it is lamentable; but let the patient investigator try the cylindrical form, after the manner that has been fully described in the Dental Obturator, vol. 1, page 6, with the same patience, time and skill, and if the result will not tell to his conscience in favor of the latter method, I am greatly mistaken.

True, it is not *easy* for *any* practitioner to make good plugs in difficult cavities with any form of gold; and when we reflect upon that truth which, if humiliating to the profession, is as freely acknowledged that among those of large practice, who *enjoy* an extended reputation and who are generally called *good* operators, there are *very few* who attain those results which are most desirable—we need no longer wonder that there is such slackness of disposition to investigate, and such readiness to condemn everything apparently new, or out of the ordinary course. You hear many condemn a thing *because* it is new, and immediately afterwards assert that it is *not* new. The men possessed of this wonderful genius used cylinders 10, 15, or even 20 years ago, yet when called upon to illustrate you find it is quite another thing both in theory and practice.

Some of them “made cylinders on an *excavator*,” some say they “rolled up their “cylinders on a *watch spring*”—others again used *blocks*, and call them cylinders, but it is of no use for them thus to lay claim to precedence in this matter, and it seems as silly as it does for those who have written for years on Dentistry to talk or write of “crushing out the nerve with a *stick*,” a drill, rapidly, rotating some instrument which is surely as clumsy as their method of description.

They are, evidently, talking and theorising on a subject with the practical part of which they are entirely unacquainted.

One in the last number of the Dental News Letter speaks of running “a spear-shaped instrument” into the same channel to dispossess it of its delicate inhabitant, and one only the other day amused me by telling me of his method of placing gold in the said channel, and when I expressed the doubt of his getting it well into the fangs in that way, especially into the molars and bicuspid, he very quietly remarked “he drilled *them* out larger.” *Dentists* will see without explanation or comment.

But to return to our subject. If any are satisfied with what they have seen of the perfection to which cylinder fillings are, and may be

carried, are they not bound as honest men to try them faithfully? If we are assured in our own minds that the points most desirable to be attained are accomplished by any particular method are we not as honest men, and as dentists aspiring after the highest attainments in our profession, required to pursue that course which will tell to the greatest advantage of our patients?

The manner of making and using cylinders, has, I before mentioned, been fully described, yet it is well for any one, before commencing this process, to see some good operator pass through a variety of operations, embracing a variety of difficult positions and formations of cavities, and illustrating the different shapes of cylinders necessary, the different sizes, and different degrees of hardness or softness according to the purpose and place where they are to be used. The power they give the operator to build up crowns that have been considerably destroyed, to build, in all cases, to the very orifice of the cavity, and all with a degree of hardness and finish when properly done, is among the principal good attained with cylindrical gold. I have looked in vain in the operations of those who use gold in other forms, with three or four exceptions, for anything like the hardness or finish accomplished by some who use the form in question.

Let *any* one follow this process faithfully, and I am sure he will ever have cause to be thankful for its adoption:

Beginning with the easy cavities on the grinding surface of the lower molars, he can proceed to those of the upper, then to the buccal cavities of the same, and afterwards to the approximal, and the most difficult compound cavities with a result most flattering to the operator—I say flattering, for there is a great satisfaction in seeing one's self improve, and the attending benefit to him who seeks our services, that will be a rich reward to him who is willing to make the first necessary sacrifices of time, labor and money.

GUTTA PERCHA.

The introduction of Gutta Percha, into the arts and manufactures of this country, has been one of increasing interest and utility, and every year its application to new uses seems to favor the belief that it will rival the usefulness of its favorite neighbor, India Rubber. We doubt whether it has yet been applied, however, to any use involving more the means of human comfort than its application to the manufacture of ar-

tificial dentures, and as this substance seems to be destined to fill an important place in our laboratories, it may not be amiss to say a word in regard to its introduction, properties, &c. It was discovered in 1845, by Dr. Montgomerie, at Singapore, in use by the natives for knife and knife-handles.

The Gutta Percha of commerce is of a brownish color and fibrous material, resembling the inner coating of white oak bark.

It is inelastic.

It may be melted and moulded any number of times, without impairing its qualities.

It resists oil or fatty substances, sulphuric, hydro-chloric and nearly all the other acids.

It is a non-conductor of electricity.

When exposed to boiling water it becomes soft, and can be moulded to the most delicate shape, which when cool, it retains its form.

The first use made of it as a base for artificial teeth known to us, was by Dr. E. Trueman of London, who says in 1853, that he has used it for several years, and that cases that have been worn three years, show no signs of change, but that he has failed to color it so that it will not fade.

Passing over the hundreds of us, who have for the last five or six years experimented with Gutta Percha, (and we could mention fifty,) we were happy to find last fall, that Dr. N. B. Slayton had succeeded in coloring it indeliably in good imitation of the gum.

But this is not all, he introduced an entirely new quality of the article from that of commerce, which, by a purifying and condensing process, becomes as different from the article of commerce, as the finest kid is finer than the peelings of Sambo's heel.

We had been experimenting with a mixture of Gum and Gutta peelings, when the pure Gutta Percha is not a gum but a sort of inner cuticle or bark of the Gutta tree, and not the "dura mater" but the "pia-mater," of this monarch of Malayan forest, and when worked properly becomes as white and fairly plastic as—as pure Gutta Percha; for we know of nothing with which to compare it. It is as pure as alabaster, and the finest steel engraving will leave its most delicate lines in perfection on its surface. Its adaptation to certain otherwise troublesome cases and for temporary work is unquestionable.

We were pleased with it on inspection last fall and we are delighted with it on full trial since.

If we know anything of the wants of the profession from our own, the case stands about thus: We feel tolerably independent in common

cases of healthy gums, full absorption and permanent appliances, but we do want something to give comfort to the patient and an abatement of trouble to the operator in the numerous cases of unavoidable-patchwork that absorbs our time; something to save the patient his money and us the annoyance of feeling that with all the we can do it is very imperfect both in adaptation and freedom from annoyance to him.

Gutta Percha will do this in a great measure, in a great number of those cases. In temporary work it is invaluable, for both can be placed in over the irregular, lacerated and absorbing gums and process, that can be worn not only without trouble but with comfort, and changes be made from time to time, as the process of absorption goes on, altering the shape of the alveolar process.

This base has been offered for temporary work only. But suppose it is found to be more congenial to the mouth than any metallic substance, (and we know from experience that it is,) and suppose it will not last more than one year, (which we think is a mistake,) all that is necessary, is to take out the skeleton of teeth and make a new base! It can be done in a few hours and at a trifling expense. We have no hesitation in saying that we have no difficulty in getting prices for all operations that are deemed at least fully up to the mark, but if there is a thing we desire *earnestly*, it is that poor people and those of limited means may have the benefits of our profession, for we believe them blessings when rightly administered.

In the introduction of Gutta Percha, we think we see an indication of this boon and most gladly do we hail it as the demonstrator of the benevolence of Dentistry.

NATURAL BONE SETTERS.

In one of the quiet towns of New England, there lived a man who went by the name of the natural bone-setter.

How he acquired the "*knack*" we do not care to inquire, although sundry tales of *sharp*(SWEET) practice on dogs, sheep, turkeys and chickens extant in that locality might be told. Suffice it to say he did and could reduce both fractures and dislocations as easily as any practiced disjoiner of beef and mutton could who had had the boldness to try. No other carver of beef did try and he reigned solus the man of fame,

the *natural bone setter*. The country was just exactly safe with him, and such was the confidence in his skill that we once heard a man say, that "he really believed if a man were to break his neck that if Dr. S. could get to him before he stopped breathing he could save him." Then there were such curious cases came under his treatment, one especially we recall which was *lock-jaw, with the mouth wide open*.

But remarkable as was this man still more remarkable was his family. Such a quantity of brothers and sons as this man had is past all belief. Truly their name is legion and every mother's son of them are *natural bone setters*.

Newton, they say, caught the idea of gravitation from the fall of an apple, and the discoverer of the expansive force of steam caught the idea from an old teakettle. So from the foregoing we catch a glimpse at the sublime race after imputed and hereditary greatness.

To a careful reader of history or a close observer of men the fact must have become fully apparent that true genius is the progenitor of a race of pigmies. But "the mass," "the million," the great colossus of "society," he who sways the sceptre of the "*will's*" and the "*wont's*" wipes out the constant instructive records of the past and places in their stead the "golden calf" of *hereditary, intuitive* and borrowed greatness, before which men bow with reverence.

We may be wanting in the popular developement of reverence or veneration.

We however claim a warm appreciation of noble deeds, but have no veneration for an empty head that wears borrowed glory for a top-knot. No veneration for the man whose life proves him to be a nothing in himself and whose sole ambition seems to be to show how much man may degenerate in a single generation.

We believe in blood in the human animal, but a thorough bred pointer *will hunt* and a true Morgan horse will *travel some*. Now who wants a superannuated pup of twelve months *high blood* to loll his feathery tongue under the shade of the "*big oak*" satisfied to let the cur start the game under his aristocratic nose?

Who wants a "*high bred*" horse too lazy to switch the flies and that blows like a fractured steam whistle the first half mile? The inheritor of *great qualities* ought to be the executor of *great deeds*, for if any thing lofty is really conferred, it must be the *power of performing* them.

ON FILLING TEETH.

BY J. S. CLARK, D.D.S.

(Continued from Page 108.)

By reference to the Journals, it will be seen that one great difficulty encountered by the profession has been that of keeping the cavity dry during the process of introducing the gold. The use of cylinders will diminish this difficulty at least one half. The cavities considered the most difficult, from their liability to an overflow of saliva are those of the lower molar teeth, and the position of the cavities are those of the buccal, approximal and grinding surfaces. The cavities are usually of less minute size than in most other teeth, and although those on the grinding surface are usually more angular, still they are usually capacious. The advantage claimed is one of time solely in the introduction. If a cavity taking five or six sheets of gold is to be filled it can be introduced and secured with cylinders against the saliva just as soon as one taking only half a sheet, so that to pack and condense properly in the usual way without cylinders the irregular lamina of foil will require ten or twelve times longer to pack the large cavity than the smaller one. For instance, a cavity on the grinding surface of the lower molar that will require five sheets of gold (No. 4 we use,) is to be filled. Four or five cylinders, of from half to full sheet will commence the operation as many more small ones placed in the angular points of the wall will render it apparently full and a few more driven into, or near the centre will condense it beyond fear of saliva, and it will yet be found that all this can be accomplished in the usual time of packing properly one half sheet of gold in the usual way, for all will allow that, if the surface of the foil is broken up, it must be brought together perfectly as the filling progresses, or the filling will be an imperfect one.

With properly adapted cylinders very little trouble will be experienced from saliva with the usual precautions, even in the lower jaw. In the upper, even napkins are usually unnecessary, and the less used the better, so far as the saliva is concerned, for they enhance its flow usually four fold.

Foil used in the usual way by which the surface is broken up requires to be condensed continuously, from the commencement to the end of the packing.

Cylinders are *adapted* by slight pressure against the walls but *condensed as a mass*, almost instantly after the main quantity is introduced.

We have spoken in a former article of the facility and safety with which frail teeth could be filled, although it is chiefly done by lateral pressure. This, we think, is owing to one peculiarity in gold. Solid gold will not expand by the pressure of an instrument, on any part of it, if the instrument is not large enough and the force sufficient to actually laminate it. Porous gold will expand so long as it is porous. Were it not for this peculiarity in the working of the metal the strongest teeth even would be broken every day. It follows then, that the filling that comes nearest this point of solidity with the least force, and reaches the non-expansive point the soonest offers the best protection to frail teeth in filling. All Dentists using cylinders, I think, must have been struck with the amount of pressure that the gold would bear even near the frail wall, without effect on its fragile structure. So a single cylinder, if annealed and hardened, (as by passing it through a wire plate rolling in the palm of the hand) may be placed in the frailest cavity of exactly its size, or may be pressed on with a pointed instrument, without danger of fracturing it, for it will not expand and cannot be fractured, the only effect on the outer surface next the wall being to make it looser than before the pressure, but if that filling were made up of several cylinders placed in the cavity and an instrument thrust down between them they would be expanded and adjusted to the walls and the pressure would the moment the air was expelled from between the lamina contact form a ring of solid gold all around and the non-expansive point would be as perfectly perceptible to the hand of an experienced operator as the difference between thrusting an instrument into a cake of sponge gold and a half eagle. This indication, too, will be given before the pressure presents much force to the walls. It will be the moment the adaptation to the walls as well as of the lamina tells that the air is expelled.

I have spoken thus far of the advantages, I will mention one disadvantage in point of time and labor in cylinder filling.

The cylinder filling properly inserted requires much longer time to cut down to the right surface than any other style of filling. If properly condensed on the surface it is about as hard as soft cast iron. Whether this be deemed an objection I leave the profession to judge.

REPORT OF CASES.

BY J. S. CLARK, D.D.S., NEW ORLEANS.

In this department of the Obturator, we wish to offer the single remark that these cases are reported because they were interesting to us, and mostly embrace points of practice, about which there exists much difference of opinion. We make no farther apology, only adding, that our method of manipulation in performing them when differing from the usual mode, will be fully given in subsequent numbers of the Obturator.

In 1850, Dr. D—— of N. O., came into the office with pain and violent inflammation in the left superior lateral incisor. The tooth presented a dark dead color, had a carious opening on its posterior approximal surface; had been *stuffed* six times, and had ulcerated for several years and at times as now painfully.

The tooth now was in a state of ulceration, and a sac was formed at the end of the fang. This sac I opened with a fine broach through the pulp canal, which produced relief. Two days after I cleaned out the fang to its apex, and also removed the decomposed dentine, leaving but a capsule of enamel, and on the labial surface so thin at the gum that a printed letter could be distinctly seen through, and found that beside the loss of pulp and the principal part of dentine, there was a fistulous opening through the fang and alveolar process, about one-eighth of an inch above the line of attached gum. There was also an opening from the sac, (at the point of the fang,) through the alveolar process, forming altogether about as unpropitious a case as I have ever met with, but to the case.

TREATMENT.

Diluted nitrate of silver was injected through the fang, and also forced through the opening in the alveolar and gum, at the apex of the fang, by winding the pipe of the syringe with cotton. The same application was made to opening just above the gum. Two days after, the fang was filled to its apex with gold, taking care to place a smooth fold of foil over the opening just above the gum. Two days more, and the crown was filled and polished. In a few weeks the mark of the ulcer at the apex opening had disappeared, and the spot over the lower opening appeared less livid, but still showed plainly, but much improvement was perceptible in the gum surrounding the tooth.

This tooth I have examined twice a year since, and this year, '56, in February, I examined it and I cannot see any change for the worse, and

have the Dr.'s assertion, that it has never given him the least trouble, and that it is worth a dozen artificial ones, of which he has several.

I present this case as an extreme one, verging as nearly to the point of useless operations as I have met with, and yet the consciousness of having enabled him to retain it, even to this time, (over five years,) is a lesson of encouragement in attempts in extreme cases to render the assistance of our art; some one has said, that. "much time and ingenuity had been given to the removal of teeth," and asks "the question," whether not more attention might be given to saving them, to advantage. When an offending member of Society is arraigned for a supposed crime "the charge to the Jury usually is, that if there is a doubt, the prisoner must have the benefit of the doubt."

Ought not a diseased tooth, (though *suspected* of too little virtue to sustain it,) to have the same benefit of such doubt?

THE MISSISSIPPI VALLEY ASSOCIATION,

Held its twelfth annual meeting at Cincinnati on the 20th and 21st of February.

Among other business transactions the following questions were discussed:

- 1st. Does continuous Gum work bear the test of Experience?
 - 2nd. What is the best method of preparing gold for filling teeth?
 - 3d. What is the best method of drying cavities previous to or during filling?
 - 4th. Has block work any advantages over single teeth?
 - 5th. What are the best methods of, and the best instruments for separating teeth preparatory to filling?
 - 6th. How can the color of the natural teeth that require filling be the most effectually preserved?
 - 7th. Is Gutta Serena reliable as a base for artificial teeth?
 - 8th. Can artificial teeth when mounted on a porcelain base be worn with advantage in any case?
 - 9th. What are the various pathological conditions of inflamed denture and what circumstances modify its treatment?
 - 10th. What is the *modus operandi* of arsenic, chloride of zinc, nitrate of silver, creosote, tannin, &c., when applied to inflamed denture.
- We extract from the minutes the report of the Committee on Dental

Progress and the report of discussion of question 7th on the use of Gutta Percha :

To the Mississippi Valley Association of Dental Surgeons.

GENTLEMEN,—The undersigned members of your Committee on Dental Progress, respectfully report that though aware of the difficulties to be encountered, and the responsibilities involved in the performance of the duties assigned, and conscious of their inability properly to discharge these duties, yet they have endeavored, as far as talent and circumstances would admit, to fulfil the requisitions imposed on them.

By a resolution of the association, at its last meeting, the committee was instructed to embrace, in the report, the progress of the three years preceding the present date ; but, from circumstances not necessary to mention, this became impracticable, and we accordingly confine ourselves to the past year, as originally intended by the society.

The association never having received and adopted a report, we have no means of ascertaining the traits of character desired by it. Left, therefore, to our own resources and suggestions, we offer you the following, relying on your kindness to excuse its imperfections, and your judgment to correct its errors.

The progress of dental, like that of general science, is necessarily irregular. A first principle becomes implanted in the mind of an individual member of the profession, it germinates, springs up, and, in turn, yields its fruits in the development of scientific truths adapted to our professional wants.

As in the great kingdom of nature, the earth yields more abundantly in some seasons than others, as it brings forth, at the same time, sweet fruits and bitter, as it produces, from the same locality, the healthful medicine and the virulent poison ; so our professional soil is prolific or barren, so it yields important truths or baneful errors, according to the character of the cultivation, the quality of the seed sown, or the nature of the mental soil in which it is cast.

In estimating the crop, the chaff and the tares must be separated from the grain; and so in estimating the progress of our profession, it is necessary to analyze the newly advanced ideas, that the worthless, and especially the hurtful, may be distinguished from the useful. In a word, the retrogression must be deducted from the progression to ascertain the real advancement made.

Since our last annual meeting, the "American Society of Dental Surgeons," the parent association, held its annual meeting in this hall, the minutes of which you have doubtless all read. Simultaneous with said meeting, this association held a called meeting, the prominent object of which was to welcome the parent society to the West. The harmony and good feeling manifested by the two societies, and by members of the profession individually, cannot fail to produce a happy and lasting effect on the welfare and prosperity of the profession. All present, we believe, will join in the sentiment, "It was good to be here." The society had under consideration the question of its final dissolution, which was still pending when it adjourned. At a subsequent meeting in Philadelphia, the question was again postponed. The only arguments

used, we believe, in favor of dissolution were, that the progress of the profession had rendered such an organization no longer necessary; that it had served the purpose for which it was organized; and, that a new organization, on a more liberal basis, would better subserve the present wants of the profession.

State and local societies have, we believe, in general, manifested more than ordinary vitality, especially the "Pennsylvania Association," if we may judge from the number of its meetings, and the reports of its discussions. That these discussions have not elicited, in all cases, correct conclusions, is, perhaps, only what is to be expected while man is mortal.

But the most prominent event, in the way of association, is the "American Dental Convention," which met in Philadelphia August 2d, 1855, at the call of some sixty of the dentists of Philadelphia and vicinity. Articles of association were adopted, and signed, by some eighty members of the profession, representing the following States and territory, viz.: Louisiana, Delaware, Kentucky, Ohio, New Jersey, Connecticut, Massachusetts, New York, Pennsylvania, and D. C.

The discussions, as reported, embrace a considerable range of subjects, and a very free interchange of sentiment was elicited. (See October Nos. of *News Letter* and *Dental Register*.) We regard this step as a decided advance in the way of association, and hope that the next meeting will be far more numerously attended; in short, that it will receive the attention from the profession which it merits.

The *American Journal of Dental Science*, the pioneer in this field, holds its own, pursuing "the even tenor of its way." As far as we are aware, it has undergone no special change during the past year. As usual, it keeps pace with the progress of the profession, and is still the largest Dental Journal extant.

The *Dental Register of the West* has donned a new suit, and is greatly enlarged, each number now containing one hundred and twelve pages. From the contents of the two enlarged numbers already issued, we infer that there will be no lack of material to fill it.

The *Dental News Letter* is regularly issued, gradually and steadily improving in appearance, and in the character of its contents. It happily adapts its size to its circumstances, enlarging when pressed by important matter. We hope it will never have occasion to *grow less*.

The *Dental Recorder* is still promptly published, and manifests a decided spirit of progress. Being issued monthly, it is often able to furnish us with new and important ideas, in advance of all its co-laborers.

The *Dental Obturator*, though started previous to our last meeting, has principally made its acquaintance with the profession since. It gives evidence of the vitality and energy which we have a right to expect from its nativity and parentage. We hail it as a valuable acquisition to our periodical literature.

A year ago, a chair of "Chemistry and Metallurgy" was established in the "Ohio College of Dental Surgery," which, it is hoped, renders the course of instruction more thorough and satisfactory to all concerned. Additions have been made to the cabinet in the shape of morbid specimens, enlarged models, anatomical preparations, etc., all, it is hoped, tending to facilitate the cause of dental education.

We regret that we are unable to give you a definite account of the past annual progress of the other colleges. The chairman of the committee addressed, by mail, the Deans of the respective faculties, soliciting information on this subject. No answer is yet received. (A note has been received from Prof. Arthur, of the Philadelphia College, since the meeting of the association, reporting, briefly, an increased class, facilities for teaching, etc., and expressing his regret that he had not leisure to report definitely.)

In the literature of the profession, aside from the periodicals, there is not much change. A new edition of "Harris's Principles and Practice of Dental Surgery," and a new and improved edition of "Fox and Harris," constitute about all that is new in this line. Both these works are published by Lindsay and Blakiston, in their usual fine style.

In the general state of professional intercourse, there is great improvement. This progress was enhanced, no doubt, by the joint meeting of this and the "American Society," and by the "American Dental Convention." When members of the profession meet personally, freely exchange ideas, and socially entertain each other, they become better pleased with themselves and with one another, and, as a natural result, jealousies vanish, and misunderstandings are corrected. The improvement in this respect is evidenced by even a casual glance at the journals. The prolonged and disgusting quarrels, the personal abuse and vituperations, are now seldom seen in their pages. We are glad to be able to state that articles of the class referred to, if written, have been, except in a few cases, for the past year excluded from the periodicals.

In the preceding remarks, we have endeavored to sketch the general progress of the profession, and, conscious of our inabilities in this, we advance with diffidence to the consideration of special improvements.

As far as we are able to judge, there has been a gradual improvement in the "continuous-gum work" since our last meeting. The alloy of platinum and arsenic for soldering platinum is worthy of attention.

Of the progress made in Dr. Loomis' style of work, we are not prepared to speak. We have seen some specimens out of the mouth, which are very handsome, but we have had no opportunity to examine practical work mounted by this method.

Something similar in style is the work of Dr. Sattersthwaite. The plate and gum are moulded and carved from suitable porcelain paste, single teeth are inserted and the whole baked at the proper temperature. This also looks well out of the mouth; we have had no opportunity of observing it in practical use. From the college cabinet we are able to present for your inspection, a specimen of each. We fear that neither will stand the test of time and experience, but we wish the gentlemen respectively the most abundant success. Both we believe are secured by letters patent.

A new or modified, style of work, mounted on a base of gutta percha, has for a few months, received, and is still receiving considerable attention from the profession. We have made no practical test of the work. It is modestly offered for temporary work only, with an intimation that it will one day be relied on for permanent operations. In all previous dental experiments with gutta percha, the color has been an

objection. In this the gum color is more life-like, and is said to be permanent in the month. The inventor, Dr. Slayton, has secured himself on his method of refining and coloring the gutta percha. We have not ascertained what coloring agent or agents, he has used. A lifelike and permanent gum color may be imparted to pure gutta percha by a solution of carmine in chloroform. Dr. S. has spoken for himself through the journals to which we refer you for particulars.

But one article of crystal gold is at present in market. We refer to that of A. J. Watts & Co. It is vastly improved in color, structure, and tenacity, and in all respects calculated to increase its practical utility. Its improved color is due to its crystalline structure, and not to any increased purity, for it was pure gold before. The dark colored specimens formerly in market were admirable preparations of *sponge gold* but, in the main, *they were not crystalline*. Gold crystals, whether large or small, if perfect, will give the same color, for the face of a crystal is always a plane surface, and its boundaries are right lines. That similar surfaces will have the same influence on light will be admitted by all who think of the subject. We regard this article in its present improved state, as a great acquisition, and an admirable article for filling teeth, notwithstanding the recent unanimous report of a large committee against it.

The drying of cavities preparatory to filling elicited considerable discussions at some of the professional meetings of the past year. We know of nothing new on this head, unless it be the application of the warm air bath, as suggested in the October number of the "Dental Register."

The production of anasthæsia by the compression of the carotids has elicited some attention. We cannot speak experimentally of its practical application to dental surgery but those who have tested it, are favorably impressed. For particulars and manipulations, see "Dental Recorder," Vol. IX. page 249 and other journals.

The application of cold to produce local insensibility is also receiving attention, especially in Great Britain. (See a discussion of this subject in the "Dental Register" for January, 1856, and other journals.) We hope that this, and the compression of the carotids will receive close attention.

In the manufacture of dental instruments we are aware of no very striking change. The spirit of progress still prevades this department, and through the talents and energy of Messrs. Sherwood, Chevalier, Kern and others it is not likely to fall behind.

In the manufacture of teeth the usual progress is manifested. Indeed this department seems to advance by geometrical rather than arithmetical progression. Orders are filled in accordance with the judgment of the most thorough and the fancy of the most fastidious. The well known firm of Jones, White & McCurdy, are still in advance of all competitors, and as usual, furnish us with almost everything that could be desired in the shape of artificial teeth. Messrs. Orum & Armstrong also furnish most beautiful teeth, of almost every desirable shape and color. Their systematical methods of numbering their moulds and the

shades of their teeth is a convenient arrangement, enabling the practitioner to select by order as satisfactorily as by personal attention.

For want of information we have doubtless failed to notice many improvements. These we hope, will not be overlooked by the society.

In all the departments thus far noticed the progress is encouraging. But there is a drawback. Ever since the *wise* men came from the east to Jerusalem, we are prone to regard the east as the place whence wisdom springs. As the orb of day arises to refresh and beautify the earth, it is little wonder that the poor pagan bows down at his coming, and "worships towards the east." Nor is it any wonder that his devotions become less fervent and his faith less firm, when his prayer is answered by the blasting and mildew of the east wind.

So the light of our profession, the star of its progress arose in the east, and the profession in the west have worshipped toward it and made pilgrimages to its temple. Its course still upward, it illumined the west gladdening the hearts of its devotees. But a breeze is felt, poisonous as that which blasted the corn of Pharaoh's dream, and yet "*wise men from the east*" advise us to breathe it.

But to drop the metaphor, we report with regret, that *some* of the prominent members of the profession east are advocating amalgam fillings. The standing, age and influence of some of these enable them to exert a very deleterious influence on the cause of dental science, an influence whose effects they will scarcely be able to counteract when their eyes again become opened. The occasion of this retrogression is the introduction of a supposed new amalgam formula, which it is thought, cannot tarnish in the mouth, the oxydation being prevented merely by the addition of another base metal to the compound. When we reflect on the past course and present position of these men we can only say "How are the mighty fallen!" Believing that their own good sense will prove sufficient to reclaim them, we regard even this as but a temporary retrogression.

In conclusion, we state as an act of justice, that the member of your committee whose name is not signed to this report is responsible for nothing it contains. His publication, *on his own responsibility*, of a document which we understood to be referred to the committee, without discussion and when but partially read, placed it beyond our power to act in concert with him.

Respectfully submitted,

GEO. WATT.

H. R. SMITH.

7th QUESTION. "Is gutta percha reliable as a base for artificial teeth."

Dr. JAMES TAYLOR said; gutta percha had been recommended only for temporary purposes, and for these he thought it reliable. He had been using it for the last few months, and in all cases but one it had answered the purpose. The only difficulty he had found in using it for temporary sets was in cases where the gum had not yet receded enough to allow a sufficient amount of it to be used. In certain cases he found it very useful. As for instance, he had a number of patients requiring an entire upper set, but who having a few good teeth in the under jaw

were not willing to sacrifice them, and wanted something put in temporary until those teeth should decay, and a plate be required. For such temporary work gutta percha is just the thing.

In one case in which he had used it he had not succeeded in getting a good fit. To remedy this he heated the set in hot water, put it in the mouth and had the teeth closed upon it, when it adapted itself to the parts, fitted well and became very comfortable. It was so much more comfortable to wear than a metallic plate, that some of his patients preferred to go to the expense of having a new set every three or four years, to wearing gold.

There were, however, four objections to it for permanent work. 1st. It was bungling in the mouth. 2d. It was difficult to polish. 3d. It would after awhile give a little around the tooth. 4th. Tobacco would stain it. Still he did not doubt but gutta percha was destined to be extensively used by the profession. He regarded it as in its infancy, and it would no doubt be greatly improved. It supplied, like continuous gum work certain wants heretofore severely felt in the profession.

Dr. GODDARD had used gutta percha, and liked it exceedingly. It adhered better to the gum than a metallic plate. He hoped it would be improved to become just what they all wanted.

Dr. BONSALE had put in but one set on gutta percha, but the experience of that one patient was highly favorable.

Dr. ULREY said: It seemed to him the very thing for temporary work, but how long it would endure without changing its color he could not tell. He did not doubt but that it would be very much improved, but was satisfied with it for temporary work just as it was, as compared with other material. It made a more natural looking gum than the continuous gum work of Dr. Allen, as the polish of that made it a reflector and gave it an unnatural appearance, while this had a very natural look.

Dr. TAFT thought its ability to accommodate itself to the parts of the mouth a great advantage. When from a change in the mouth, or other cause it failed to fit, it could be warmed over a spirit lamp, drawn up to the parts and made to fit perfectly. It was also found quite firm enough to hold the teeth in their place, but its adaptation to the parts was its great quality.

Dr. TAYLOR then described the manner of using it. He first fitted a sheet of gutta percha to the plaster model, but did not swedge it up. At first he had imagined that something would be gained in density and fit by swedging, but found by experience no such advantages, and had given up the practice. He then prepared a narrow plate, little or no wider than the teeth, and fitted it to the gutta percha, having it sufficiently hot to make it stick.

Ordinary plate teeth were not at all adapted to be used with gutta percha. As the whole of the metal is covered, silver answers just as well as gold. They were sometimes made with air chambers, but they adhere just as well without. One great advantage of their elasticity was, that in biting on one side the other was not so liable to fall, as was the case with the metallic plate. It yielded sufficiently to retain its position on the opposite side.

(From the Dental News Letter.)

CONDENSATION OF GOLD.

We promised in the last News Letter that we would continue our article on this very important subject ; we also stated, at the commencement of our experiments with our *dynamometer*; that we would make the experiments for every body's use, and we see already that the facts then stated are being applied in the consideration of the subject of the kind of gold best suited for plugging teeth. It is doubtless on this ground that the great question will be settled at last, as to what is the proper preparation of gold for the purpose of plugging, and as to how it should be introduced into a cavity for general purposes. One preparation may be better suited in special cases, however, than another, a matter which will always require the exercise of the judgment of an experienced operator.

Cylindrically Prepared Foil.—We were first instructed in this method of using gold foil in August last, by Dr. J. S. Clark, a distinguished dentist of New Orleans. He wished us at the time to test it for him, and in due time give our opinion about it. This he could do, however, much better than we ; he has given his method to the world already, and if we should commit any errors in what we say about it, we wish him to correct us. He cuts the foil into strips, wider or narrower as may be required, and then folds it upon itself as a surgeon makes a compress, or as a bolt of cloth is folded. He considers this preferable to rolling it on a narrow watch string, as we have been in the habit of doing for years' in making flat pellets, on account of its allowing the air to escape from between the folds during the process of condensation. He folds it on a yielding surface, such as a piece of buckskin fixed to a board, or on a hard cushion. We use a cushion and commence by placing one blade of our gold scissors in the middle of the strip to be folded, and, pressing gently, the edges of the strip will be raised up as the middle is thus depressed, which favors us in throwing the edges together ; now the strip is only half as wide as when we commenced ; we repeat this operation until we have the strip narrowed to the desired size, making some wider or narrower, according to the depth of the cavity to be filled. These folded strips are now ready to be rolled into cylinders, which is readily done by using a watchmaker's broach a little larger than a cambric needle ; any one can make as good an instrument, however, of a small wire or a common pin ; this instrument must be square, or five or six sided, to present edges to hold on to the strip while rolling it. The end of the strip to be rolled, is taken between the thumb and forefinger of the left hand, and the point of the instrument placed on the end of the strip and pressed hardly upon it, and rotated at the same time to catch and hold the strip while rolling it. The cylinder may be made harder or looser, as the case may be, proportionally as the strip is allowed to escape from the grasp of the finger and thumb, between which it is held ; they may be made larger or smaller as the case may be. A leaf of No. 4 gold, cut into three portions, makes very convenient sized strips when folded, or No. 6 gold, cut into four parts. If the strip when folded is too heavy, it will not roll well into the cylinders.

because it requires too much effort to bend the strip, and the needle on which it is rolled will tear the inner folds and loosen its hold on the strip. Small cylinders, as a general rule, may be rolled harder than larger ones, and they may be from the size of a No. 8 needle to that of a common quill. If this method of preparing the gold before it is placed into the cavity, be carefully followed, the surfaces of the folds will be brought into contact with each other with such accuracy that the slightest pressure will make the mass quite solid. The lighter leaves make better cylinders than the heavy ones: therefore we use No. 4, 5 and 6; and never any heavier than 6. In placing these cylinders in a cavity, a large and loosely rolled one is placed in first, if a smaller one cannot be retained in its place, and then this cylinder may be * pierced with a round pointed instrument and a smaller cylinder introduced into it, and so on until the cavity is filled, when the whole mass may be pressed well and filed off and polished.

The whole process is to begin with large cylinders and any kind of an instrument to put them in place, such as a small pincer or plugger, and then using smaller and smaller pluggers and cylinders until the cavity is filled, ceasing with a very small instrument and small hard cylinders somewhere in the body of the plug, instead of between the plug and the margin of the cavity. There may be some disadvantages in using cylinders, such as taking the risk of breaking the walls of a cavity, but this danger seems to us to be as great with foil in the form of coil or twisted rope, if the same density of the gold is obtained near the walls of the cavity; and, again, that they cannot be used as well as the rope on approximal surfaces. We cannot yet use them as readily in some of those cases, or in very shallow cavities, as well as the coil or strip before it is rolled into cylinders, but for crown cavities they are invaluable in regard to the strength of the plug, and economy in time and labor. We demonstrated before the class in the college that more gold could be put in an ingot, with about one-third the pressure required for condensing foil in the ordinary way. We find that the ends of the cylinders excite considerable irritation when they come in contact with sensitive dentine; this can be obviated by placing a thin layer of folded gold over the sensitive part of the cavity before introducing the cylinders. A plug of this kind is much more readily polished than the coil, and is not liable to scale off in masticating. The plug can also be allowed to extend above the surface of the cavity, without the danger of it breaking off, that attends the use of the coil. We use the cylinder gold wherever

* Dr. J. D. White in the article has politely asked us to make any corrections in his description of cylinder filling as introduced to the profession by us, and we will make one, which is, the cylinder instead of being opened to receive another or others is slightly pressed against the wall of the cavity and others placed beside it until the cavity is apparently full, others harder and smaller are then forced in wherever a round and slightly pointed instrument can be inserted to make the opening. This has been and is our method. We have no doubt that a very loose cylinder might be opened in the way he describes, but have never tried it in that way. We have much interest and perfect confidence in the experiments of Professor White with cylinder filling in connection with his "Dynamometer," and we fully expect from them the establishment of the fact that a denser filling can be put in with cylinders with much less pressure than by any other method. We have not wedded a theory until wooed by years of utilitarian facts.—EDITOR OF OBTURATOR.

we can, notwithstanding some members of the profession have used it many years ago, and have abandoned it. The best operations performed by the graduates of the class of the Philadelphia Dental College were done with cylinders. We state this to show that young men can use it as well as the coil or rope.

We are quite sure we cannot do the subject full justice in a short article, nor can we, indeed, give a proper idea of the simplicity of the method in writing; five minutes showing would, in our humble opinion, do more good than a week's writing; and we take occasion here to thank Dr. Clark for his kindness in showing us its use during the sitting of the Convention last summer.

J. D. W.

DENTAL COLLEGES.

Since our last issue the three Colleges, the Baltimore, the Ohio and the Philadelphia have closed their yearly sessions.

The graduates of the	Baltimore college	numbered	-	-	-	17
The	"	Ohio	"	"	-	10
The	"	Philadelphia	"	"	-	22

We are pleased to learn that the Baltimore college have induced that *work-re-*nowned operator, Dr. E. Maynard, to take the chair of Dental Practice in that institution.

It certainly could not be better filled from the entire profession.

The Faculty of the Philadelphia College have richly earned the thanks of the profession for the manly defense of the honorarium of the Diploma.

They choose to resign (and carried it out nobly) rather than allow the sacrilege of permitting the community to be imposed upon by lay-parchments under the name of the college with which they were connected.

THE AMERICAN DENTAL CONVENTION.

This body will meet in New York on the first Wednesday of August next.

We hope to see a large number of our Southern Dentists in that body this year. No one can doubt the utility of such an intercourse with the members of the profession from all parts of the country, and we feel sure that no one who attends will return with regrets for the visit.

It is confidently expected that there will be several Dentist's from Europe and other foreign countries present on that occasion.

NEW ORLEANS DENTAL DEPOT.

The profession South will doubtless be glad to be apprised of the fact that a Dental Depot has been opened in New Orleans, where a full supply of all articles used by Dentists can be obtained by selection or order. We take pleasure in saying that orders sent to the depot will be filled with promptness and fidelity, and insert the following testimonials in favor of the agent, from the

Right Reverend LEONIDAS POLK, Bishop of this Diocese.
Rev. W. T. LEACOCK,
Rev. C. H. WILLIAMSON,
Hon. R. RICHARDSON,
Hon. THOS. CURRY,

Whose signatures are all appended to the following :

"We have no hesitation in recommending T. Jennings, Jr., to the full confidence of all persons who may trust to his honesty and fidelity in the transaction of any business."

This must prove satisfactory on that point to all Dentist's sending orders enclosing remittances for stock or materials.

As to capacity in making proper selections in particular cases selecting teeth to cast by description, &c., we will state that Dr. Jennings studied Dentistry 16 years in Boston—commencing with the office manufacture of teeth and blocks, and has practiced ever since, and is familiar with the wants of Dentists, especially in constructing artificial Dentures.

The Depot opens with 20,000 teeth of Jones, White & McCurdy's manufacture, together with the usual staple articles of Dental stock.

All communications are to be addressed to the N. O. Dental Depot, T. Jennings, Jr., Agent, New Orleans. See advertisement.

THE DENTAL OBTURATOR.

VOL. II.

SEPTEMBER, 1856.

NO. 2.

REPORT OF THE MEETING OF THE WESTERN DENTAL SOCIETY, AT CHICAGO, ILL., IN THE INTERNATIONAL HALL, JULY 30TH, 1856.

Present,

Dr. Allport, Chicago, Ill.	Dr. A. M. Kelsey, Geneva, Ill.
“ I. C. Quinlan, Chicago, Ill.	“ D W. Perkins, Rome, N. Y.
“ W. H. Kennicott, “	“ H. R. Smith, Terre Haute, Ind.
“ Kennicott, “	“ C. P. Fitch, Milwaukie.
“ E. Honsinger, “	“ Hanson, “
“ T. P. Abell, “	“ I. P. Norman, Bockford, Ill.
“ E. A. Bogue, “	“ Anderson, Hannibal, Mo.
“ J. S. Clark, New Orleans.	“ Solyman Brown, New York.
“ S. F. Knapp, “	“ Wm. Smith, Ottawa, Ill.
“ C. W. Spalding, St Louis.	“ A. T. Metcalf, Kalamazoo, Mich.
“ A. Blake, “	“ Mansfield, Niles, Mich.
“ Henry Barron, “	“ E. J. E. Carpenter, Joliet. .
“ S. Dunham, “	“ C. J. Reynolds, Dixon, Ill.
“ H. J. B. McKellops, “	“ A. Gibbs, Chicago, Ill.
“ H. N. Lewis, Quincy, Ill.	

In the absence of the President, D. E. Hale, of St. Louis, Dr. Allport, one of the Vice Presidents, was called to the chair.

Dr. Allport said, that in the unexpected absence of the President, he should detain the meeting with but a very few remarks.

A few years had effected a remarkable change in the Dental Profession. Formerly a knowledge of its more elevated practice was confined to the larger cities. Now the science of Dentistry was extended over the whole country, north, south, east and west. This was the normal result of a generous liberality on the part of a few eminent practitioners, who had made known the principles and practice of Dentistry to their professional brethren, as well as to students in the art, both privately and by means of periodicals and colleges, established expressly for the purpose, in various parts of the country. The names of Parmy, Harris,

Maynard, Taylor, Townsend, Dwinelle, Solyman Brown, Dunning, Westcott, Clark, and others, would readily occur in this connection.

In pursuance of the same object, and in imitation of these noble examples, we organized this Society last April, in the Great West, and have now met for mutual instruction and improvement.

It was then, on motion, resolved, that Dr. Solyman Brown, of N. Y., Drs. Clark and Knapp N. O., Dr. Perkins, of Rome, N. Y., and Dr. Smith, of Terre Haute, Ind., (one of the Professors of the Cincinnati College of Dental Surgeons,) be invited to participate in the business of the present meeting.

After reading and approving the minutes of the last meeting, a committee consisting of Drs. Blake, Dunham and Clark reported as the special business of the session, the following subjects for discussion, viz., The Extraction of the deciduous teeth of children ; The Plugging of the fangs of teeth ; The use of Gutta-Percha as the basis of artificial teeth ; and Crystal Gold.

This judicious selection of subjects was approved by the meeting.

Dr. Clark on being called upon opened the discussion on Deciduous Teeth. He said he deemed the subject one of pre-eminent importance, and if there was a point of practice that brought the careful operator the most cause for anxiety as to the adoption of correct practice, and of regret for popular mistakes and consequent mal-practice, it was the treatment of deciduous teeth.

These teeth had their use, and it was an important one, not only as furnishing temporary means of mastication, but in the production of a second permanent set, and if in any way they were wrested from that service, it must be considered as a misfortune. The first sett, or deciduous teeth, were designed undoubtedly to answer the purpose of mastication, and to retain that office until the second teeth, developing under them, caused the loss of the deciduous fang by the process of absorption. Their retention, then, to that point, was a matter of importance.

Another point, and a material one, in this connection, he would mention. Immediately after the production of the deciduous teeth, (20 in number), came four protectors, in the shape of four permanent molars, one on each side above and below.

Their office was, by antagonizing, to protect the deciduous teeth in their coming days of weakness, and also to serve as pillars, holding the jaws in correct articulation, while the first are lost, and the second sett are developed.

Extract one of these, (*which mothers and nurses will always pronounce*

first, or deciduous teeth), and the jaw will tilt over until it meets with an antagonizing point. It may be a right articulation, but it is very apt to be a wrong one, and the cause of many lamentable cases of irregularity.

We have, then, clearly the indication for the preservation of these teeth and the deciduous ones, until they have performed their several functions.

He condemned the *wholesale extracting* of those teeth *to order*.

He did not extract one for ten brought to him for that purpose.

Dr. Kennicott inquired of Dr. Clarke what had been his successes in stopping deciduous teeth.

Dr. Clark responded that he had never courted success in that line. He called it only *stuffing*.

Dr. Perkins remarked, that the development of the human physical system was harmonious throughout, and simultaneous in all its parts. He described the development of the two successive sets of human teeth. In treating the teeth of children he always regards primarily the welfare of the adult teeth which succeed them. The teeth of children are now developed much earlier in this country than in former years, the probable result of the different habits of society at successive periods.

Dr. Knapp inquired of Dr. Perkins whether he would extract deciduous teeth, when they were decayed to the nerve; and was answered that it would depend somewhat upon circumstances.

Dr. Knapp remarked, that children should be taught to exercise their teeth in the mastication of hard food, which is necessary to their healthy development.

Dr. Clark remarked that Dr. Knapp had been trying the experiment for four or five years, of brushing his children's teeth morning and evening, with his own hands, not being willing to entrust the experiment to nurses, and that his success in preserving them seemed thus far very perfect.

Dr. Perkins does not allow his children to use vinegar; in consequence of the deleterious effects of all acids except those of the milder forms, such as found in fruits. He does this by way of experiment, as he thinks vinegar injures the tender enamel of children's teeth.

Dr. Dunham inquired whether there is any particular advantage in filling children's teeth.

Dr. Clark replied that he used all means, such as cleanliness, treatment in case of pain, and stuffing or filling, to ensure their retention to as near the point of indication to removal as possible.

Dr. Allport stated that he had been in the habit of doing so, when it seemed proper. When practicable he files instead of filling. He thinks that the subject of keeping children's teeth clean is of very great moment ; on which point dentists ought to take great pains to instruct the public. Adjourned till 2 P. M.

AFTERNOON SESSION.

The subject of " Children's Teeth " was resumed.

Dr. Clark spoke at some length of the action of acids on the teeth ; acids in food, acids in the secretions, and acids generated by foul deposits between and around the teeth.

He did not know, however, how far this crusade against acids should be carried, and had not, like Dr. Perkins, banished vinegar from his table.

He did not know that many of our acid fruits, or even vinegar, might not be not only admissable, but really beneficial to the teeth in a healthy state. We ought to take into account physiological facts, as well as facts in chemistry.

To say that with the well known affinity of acids for lime, that the teeth are composed of some 80 per cent. lime, is, chemically considered, rather alarming to the users of acetic or malic acid ; but when we consider it, physiologically, it is another matter.

Dr. Perkins believed that the luxuries of the present age, in this country, are destroying teeth with alarming rapidity, by vitrioling the general constitution, as well as by direct action on the teeth.

Dr. Quinlan thinks that the experiments already made show clearly that acid substances injure the teeth.

Dr. Fitch thinks the great question is, what acids the food develops, and what action they have upon the teeth, and believing that the subject had been sufficiently discussed for the present, he suggested that the second question, " Fang Filling," be taken up for the afternoon discussion.

Fang Filling.

Dr. Clark being called on, said—

He had practiced the extirpating the nerve or pulp, and filling the canal occupied by it, for some nine or ten years, and that his present confidence in the operation is greater than any preceding expectations.

The history of this discovery was somewhat obscure. All he could say was, that it was performed many years previous to his attempts. The profession knew how far Dr. Koeker carried his operations in this

direction, and it is certain that Dr. Maynard, Harwood, Badger, and Hudson practiced it years before any of us.

His method of operating he had long since given to the profession, which was to draw the temper from a fine broach, and to cut "fish-hook" barbs on one side, say two rows on two of the broach edges, with a sharp knife, leaving the other side perfectly smooth.

With the smooth side next the wall of the canal, he thrusts the instrument to the apex foramen; then carefully rotating and withdrawing the instrument, the nerve or pulp is caught on the barbs, and the pulp thus removed.

The operation of filling is the most simple part of it. Several broaches drawn to a blue, are loaded with strips of foil (say 1-8th of an inch wide) from the point of the broach to as near the shape of the canal as possible.

One of these is inserted to the apex, the broach withdrawn from its coating or cylinder of gold. A small smooth instrument is then thrust up by its side, and another loaded broach, as before, and so on until it is full. This method has one advantage. Should ulceration be threatened, and treatment be necessarily resumed, this filling can be removed by the tweezers.

If the pulp is entirely removed, or disease thoroughly eradicated, and this canal faithfully filled, we may hope for favorable results; but we should not promise our patients too much. Fang filling, from the very nature of the operation, must be somewhat uncertain. In fact, like all surgical operations, the operator is not the one to promise inevitably a cure.

We do not cure disease in any form. We merely remove obstructions and supply deficiencies, and nature does the rest.

Dr. Knapp said:—The removal of the pulp of the fang is sometimes difficult, also the filling of the fang, especially of the molars. Kreosote is the best agent for cleaning out the *pulp* from the cavity.

Dr. Anderson uses Kreosote and Arsenic to cleanse a nerve cavity and prepare it for filling. These substances are introduced on cotton by means of a broach.

Dr. Kennicott frequently extracts the nerve by the use of a piece of hickory, and sometimes stops the cavity with a well fitted hickory plug.

Dr. McKellops uses nitrate of silver, 60 grains to the oz., to clear out the fang, and employs an instrument manufactured by the New York Teeth Manufacturing Company, which is excellent for the purpose.

Dr. Perkins uses the Chloride of Soda to inject the fangs of teeth.

Sometimes the fang has an ulcer when there is no other disease in the tooth.

Dr. Clark treats ulcerated fangs by thrusting Kreosote up the orifice on cotton, and leaving it there from time to time for some days.

Dr. Dunham did not think favorably of the hickory plug spoken of by Dr. Kennicott, (in explanation of a case of his alluded to.)

Dr. Clark stated that in cases where the fang of a molar with a lateral decay to the nerve, required to be stopped with gold, he was in the habit of drilling a hole through the grinding surface of the enamel, in order to get access with his broach to the orifice of the root.

At this stage of the proceedings, on motion of Dr. Allport, the following gentlemen, not residents within the geographical limits of the society, were elected as honorary members :

Dr. S. Brown, of New York.

“ Perkins, of Rome, N. Y.

“ Smith, of Terre Haute, Ind.

“ Clarke, of New Orleans, La.

“ Knapp, “ “

“ Knapp, of Jackson, Miss.

EVENING SESSION.

Subject—*Gutta Percha as a base for teeth.*

Dr. Dunham thinks Gutta Percha very useful in cases where the teeth have been recently extracted, and the alveous very prominent, especially about the eye teeth. In these cases it is often very difficult to use metallic plates without making the lips too prominent. He prefers to use a thin plate of Gutta Percha rather than a gold plate, the ends of the teeth resting on the gum without a plate in front.

Dr. Smith has used Gutta Percha in two cases, but does not like it; especially the samples which he had, and which were said to have been made by Dr. Slayton. The texture and color were both bad.

Dr. Quinlan is of opinion that Gutta Percha will be found in many cases to be very useful.

Dr. Spalding uses gold plate for temporary cases as the best material. When the gum changes much he uses Gutta Percha to fill up the interstice or chasm between the plate and the arch of the palate and the alveolar ridge. This plan he finds to work well.

Dr. Clark does not use Gutta Percha for permanent sets of teeth, but nevertheless regards it as useful for many purposes, particularly when a piece of work constructed upon it brings the patient back in quick time

for a new set on proper material. He occasionally uses it for patching up old work, which is generally neither very pleasant nor very profitable to the Dentist. He thinks that when a Gutta Percha plate wears through very soon, it is owing to the material having been overheated, or burned by the lamp.

For lower pieces where only the front teeth are gone, he likes Gutta Percha, yet he has no reliance upon it for any but temporary sets.

SECOND DAY.

Continuous Gum.

The Secretary read the minutes of yesterday, which were amended and adopted.

Dr. Clark was requested by Dr. Spalding to state whether solder made with arsenic, will eat up the platina plate.

Dr. Clark thinks it will if the arsenic is in excess. The sanguine hopes at first expressed, have not been fully realized. The experiments have not thus far been fully satisfactory, but he hopes the difficulties will be ultimately overcome.

Dr. Honsinger had one job of continuous gum, which was not successful, and only one. He proceeded to describe the case minutely. A set of gum teeth had failed in the mouth. He substituted continuous gum. This soon lost one molar, and the gum was broken and loose. Made a new set, and that gave way. Then struck a second plate and added it to the first, bringing the edge over the front enamel. This also gave way, probably on account of the many bakings.

Dr. Clark advised Dr. H. to send his subject to Dr. Harris, of Philadelphia, who once had a similar case, a lower set, which he made of cast iron.

Dr. Allport said he was gratified to hear gentlemen give us an account of failures, for he thought much more could be learned from some failures than from many successes.

Dr. Spalding said, in relation to the articulation of continuous gum work it must be good, but when the antagonizing teeth are gone, the danger of unequal pressure can hardly be avoided.

Dr. Perkins had encountered the same difficulty. In such cases he has made the backing and front part of the plate exceedingly strong, and put a block of platina over the place of strongest pressure.

Dr. McKellops has done a good deal of continuous gum work. One piece after 6 months, exhibited the four front teeth projecting forward. He split the bakings and turned one half the back up on the plate;

then baked carefully; merely soldered the backs to the plate, not the pivots.

Had a case where the patient had worn gold plate; first made a block—then substituted gum work. The principal strength of this work is in the baking; the first bake of the body should be but just sufficient to cause the material to adhere.

A young gentleman present was called on by the President to explain his method of making gum work, described the process generally, but owing to the want of time, too briefly to be of much practical use.

Dr. Blake thinks that the baking should be *progressive*—each baking more than the former fusing the whole mass.

Described a case of filling up the cheeks, which was fully successful, and is of opinion that continuous gum work is of considerable use to the profession.

Dr. Clark wished to know the experience of the gentlemen present in relation to air chambers. He used them sometimes, not always. He knew of no plainly established rule to govern him when to use them and when not. In looking back at his practice, he found he had adopted something like the following:—When the center of the palatine arch is hard, or has a hard protuberance or sort of back bone running through its center, he used a chamber, and a large one, but not deep. When the whole arch and gum are spongy, and the membrane thick, he did not use one. He would also like to call attention to the articulating of artificial teeth.

It had been stated, that in natural dentures, a line drawn from the canine to the last molar of the upper jaw, would generally show the teeth to be in the same line.

Artificial teeth cannot have all the uses of natural ones. Natural teeth may interlock by long cusps; artificial ones would be useless articulated thus; and the pieces from our best dentists, and those proving the most useful, are set in a more perfect circle than the natural ones, owing to the necessity of relying mainly on the masseter muscle for their use. Then the lower jaw generally protrudes, so that the circle is necessarily enlarged at the bicuspid part of the arch.

Dr. Dunham is pleased with the character of the discussion this morning. Is obliged to Dr. Honsinger for his particular delineation of his *failures*. This is even more useful to us than a description of our *successes*.

Dr. Dunham sometimes uses air chambers in the cases stated by Dr. Clarke, and does not use them in soft spongy gums.

Describes a plan of making air chambers. Cuts a piece of tin an inch

long and half or three-quarter inch wide ; after swedging his plate he places the tin in the female cast and strikes the plate over it. This prevents the rocking.

He takes upper impressions generally in wax ; lower ones in plaster.

When the wax is introduced, he directs his patient to press his fingers against the cheek and wax over the molars, whilst he presses up the cup to its position. He presses the front wax a little inward, after taken from the mouth.

Dr. Bogue wished the opinion of gentlemen as to air chambers.

Dr. Dunham generally takes three casts, and selects the poorest to swedge on at first, then if the fit is bad, on another, and so on to the last, if necessary.

Dr. Spalding uses air chambers when the hard prominence exists in the arch. In almost all cases of partial sets he uses air chambers.

Makes the edge of the chamber square and not rounded, to prevent the expansion of muscle into the chamber.

In order to produce the square edge he cuts out a piece of the thin plate. Though shallow, the chamber will not fill with flesh ; and its impression is scarcely perceptible to the eye. Considers them better than deep chambers.

On the subject of impressions he has settled upon wax exclusively unmixed.

Uses sheet zinc to strike off a preparatory plate or cup. In this plate he places sheet wax of equal thickness and warmth. When the gum is spongy he cools the wax a little.

In lower plates when the sheet of wax is placed on the zinc plate, he gently presses the wax on the zinc die, to give an *approximation* to the true forms. Takes cold water into the mouth to cool the wax.

In lower plates it was his custom to limit the plate at the movable muscles. Draws a line on his plaster with a pencil where he judges the muscle will move. Increases the suction by remodeling the edge of the plate in front.

One of the most difficult points to fit is behind and around the condyle of the jaw. Attaches the rim to the edge of this curved edge of the plate. This curved edge not only increases the suction, but may be made to fill up the month and keep out the lip as desired. Around the condyle it is sometimes necessary to cut out a wedge of the plate. Sometimes injects cold water about the condyle to harden the wax before removing it.

The zinc plate may be $\frac{1}{4}$ of an inch wider than the gold-plate. Does not spread the zinc plate at all at the sides.

Dr. Dunham asks whether Dr. Spaulding ever springs the zinc plate, by unequal pressure. The body of wax must be as thin as possible, and not break, also the wax must be very soft.

A hole must be in the centre of the plate to let in the air before removing.

Sometimes he pears off a little of the plaster cast in front, to compensate for the imperfect fit over the edge of the alveolus.

Dr. Smith, of Ottawa, wished to know whether an *atmospheric pressure plate* is the same as a *suction plate*.

Dr. Spaulding thought that capillary attraction had as much to do with the support of the plate in the mouth as atmospheric pressure.

Dr. Dunham differed from Dr. Spaulding on the subject of atmospheric pressure; he believes that atmospheric pressure does exist, because if a small orifice be made into an air chamber the plate will drop.

Dr. McKellops does not know how Dr. Spaulding can put a little wax in his plate, and get the soft parts more perfectly than plaster will give. And also how one person finds it necessary to press his wax in in front and around the edge, while Dr. Spaulding accomplishes the same thing by carving the wax out at the same points. He must say of central cavities that they are useful. Thinks that in flabby mouths plaster is better than wax.

Dr. Spalding responds that wax impressions caused no more necessary pressure than plaster, if the wax is sufficiently warm.

Engrave a groove in the exact place on the plaster cast where the plate is to terminate on the palate. This forms a flange on the plate for its more perfect adaptation.

Dr. Anderson has thought the air chamber was sometimes used for ornament. Thinks the prettiest form of a plate is that of nature. Thinks the pressure should be removed from the palatial arch for the purpose of avoiding the rocking of the plate. For this purpose he removes an equal surface of the plaster cast, excepting near the posterior part.—This plate will ultimately settle about enough to fill up the cavity. Thus the pressure is brought upon the alveolus where it belongs.

Dr. Clark thinks there need be no misuse of terms in regard to the chambered plates, called atmospheric pressure plates. It seems to him that we have two principles that effect the object, viz., COHESION and ATMOSPHERIC PRESSURE.

Capillary attraction is another thing. It pertains to fluids in connection with tubes, as is shown by the sponge. What is called suction is the effect produced by air exhaustion from between two bodies not in contact.

So then, in the plain plate, we have cohesion (*a well known principle when two bodies are in absolute contact*) and atmospheric pressure.

In the cavity plate we have these two principles and suction, if the air can be exhausted from the chamber. Moisture only assists by lubrication making the contact more perfect, and only assists cohesion, which cannot be called capillary attraction.

Dr. Fitch denies that cohesion or attraction has anything to do with the plates of teeth. They adhere from atmospheric pressure. Has found air chambers in some cases important.

Dr. Spaulding thinks the perfect fit of the margins of the plate more important than the fit in its middle parts.

Dr. Perkins denies cohesive attraction and asserts atmospheric pressure, in the case of plates.

Professor Palmer, of the Michigan Medical University, was requested to explain the terms cohesion and adhesion, and atmospheric pressure.

Dr. Palmer said—Being thus called upon to make remarks in this convention of Dentists, though this profession was of a kindred one with his own, was, of course, entirely unexpected; but he had no objection to stating his impressions of some of the points in natural philosophy, which this discussion had suggested.

Attraction is that force or principle in matter by which bodies or their particles are drawn towards each other, or which prevents their separation when united. Aside from chemical and electrical, which are irrelevant to the subject under discussion, writers recognise two kinds of attraction—one operating at *sensible*, and the other at *insensible* distances. The *first* is called attraction of gravitation, and is that which causes a body to fall to the earth, and keeps the whole planetary system in motion and order; the second attraction of *cohesion*, and is that which holds the particles of bodies in contact, giving them consistency, solidity, and strength. This principle of attraction is inherent in all matter—that is, unless opposed by other forces, there is a tendency in matter for its different parts to come together, the tendency increasing with promixity; and when the particles are brought to an insensible distance, they embrace each other by this attractive force—with different degrees of energy, to be sure, depending, in a large measure at least, upon the nearness with which a large number of particles are brought together, causing the more or less solid and tenacious forms of bodies.

When two plane and highly polished surfaces are brought in contact, a large number of particles are brought in the closest promixity, and this cohesive attraction holds them together. When less smooth, but still comparatively hard surfaces are brought in contact, and pressed upon each other with force, with many substances, promixity of particles occurs, and

cohesion takes place. When certain solid masses are partially liquified or softened as by heat, which softening or liquification is effected by temporarily diminishing cohesive force, more particles are readily brought in contact, and the process of *welding occurs*.

Under certain circumstances, when an unctuous or other semifluid substance is introduced, in small quantities, between two surfaces, it serves as a band of union, by the attraction of the material for both surfaces.

Adhesion is a general term, signifying the state of sticking to, or being attached by whatever means to something else—*cohesion* being the more scientific or technical term, as applied in a philosophical sense.

Capillary attraction is a modification of cohesive attraction, and is applied to the rising of liquids in small tubes, by the attraction between the liquid and the sides of the tubes. The taking up of water by a sponge or cloth is on the same principle—the pores of the sponge and fibres of the cloth acting as the small tubes, and the same term is applied to the process in these cases.

But there is another power which tends to hold two smooth surfaces in contact. This is the pressure of the atmosphere. When surfaces are brought together in such a manner as to exclude the atmosphere, or prevent its introduction at the margins, an attempt to separate these surfaces would tend to produce a vacuum, and would be resisted by this pressure.

Both atmospheric pressure and cohesive attraction operate usually in holding surfaces together—sometimes one and sometimes the other having the greater effect, according to the circumstances of each case.

In keeping plates in the mouth, the atmospheric pressure probably has usually much the more effect. In filling cavities of the teeth with gold, cohesion is the principal effective agent. It is cohesion which causes foil and crystal gold, when pressed firmly together, to form a solid mass, uniting by the same force, as in the case of superficial cavities, the gold to the tooth itself.

The term *suction* indicates the act by which the atmosphere is exhausted from a cavity, and where the atmospheric pressure upon surrounding surfaces forces a fluid or other substance into that cavity.

As applied to a plate in the mouth, the adjective is scarcely as appropriate as other modes of expression.

Adjourned till half-past 2 P. M.

SECOND DAY—AFTERNOON SESSION.

Dr. McKellops moved that the constitution of this Society be published.

Resolved that the Secretary be requested to furnish Dr. S. Brown with a copy of the constitution for publication in the *Forcep*.

The subject of gold as fillings for the teeth, was the order of business

Dr. Clark said that he had great confidence in gold foil, and thought, if all its properties were understood, it would accomplish much more than was generally expected of it.

He was not prepared to give up his confidence in gold foil, nor was he prepared to say that desirable operations might be performed with crystal gold that could not be done with foil; but some samples of filling which he had accidentally seen of Dr. Allport's of Chicago, led him to suspect such was the case.

One case he would mention. A lady, with two front incisors, which had large approximal cavities, presenting pretty much the appearance of having been separated with a file, $\frac{1}{4}$ of an inch thick, down two-thirds of the distance to the gum. These two teeth were restored perfectly to their original shape. The approximal surfaces, the cutting edges, buccal and lingual surfaces, and all. When he stated the fact that the nerves were both preserved, and that these teeth, bearing the marks of perfect articulation with the lower teeth, had been used for nineteen months, the profession would see the difficulties encountered.

He thought such demonstrations worth all the word pages of theory that could be written on this subject. The class of men who are doing this kind work encourage us all to make high endeavors in our art.

In thus complimenting Dr. Allport, he does not mean to say that he is going home to throw away his instruments. No such thing, but he is going back to endeavor to imitate these great examples.

Dr. Smith once thought he could plug a tooth tolerably well. But he had lately seen a first bicuspid, filled by Dr. Allport, two thirds of which above the gum was of crystal gold. It preserved the original form of the tooth and performed all the purposes of mastication.

Dr. Knapp (of N. O.) thinks that cylinders are the best form of gold for plugs as a general thing. This system of cylinders used by Dr. Clark, he thinks is new. That any former methods claimed to be such were quite different from this. Crystal gold will doubtless succeed in some cases, especially in building up parts of teeth, such as had seen of Dr. Allport's, better than any kind of foil.

Dr. Knapp, of Miss., was here named and elected an honorary member of the Society.

He returned thanks for the honors, and stated that he has succeeded better with cylinder fillings than with gold in any other form.

Dr. Spalding stated that he had regarded crystal gold as the very best material for filling very shallow cavities; and also in building up structure, the crystal gold is the perfection of material.

Cylinders will make the best filling in the shortest period of time, and with sure labor.

The first specimen of cylinder stoppings I had seen were (ten years ago) by Dr. O. P. Laird, of Columbus, Ga., when he was in Savannah, Ga.* He saw also ten years ago plugs by Dr. Badger, which were very excellent, better than himself can do. He had understood that Dr. Badger used cylinder plugs. He formerly suggested to Dr. Clark the propriety of seeing Dr. Badger—but Dr. Clark has made improvements in the method of forming cylinders. He does not wish to deprive any gentleman of his laurels.

On the whole he regards cylinder plugs as equal to any other, not excepting crystal gold. The plugs of ordinary form, of crystals and cylinders respectively, are so nearly equal that the difference is not worth regarding.

Dr. Clark had always made it a special aim in all his professional life to accord to every gentleman all the honors of discovery or introduction of improvements, and he would ever be found punctilious on this point. In the winter of '49, in New Orleans, he formed the acquaintance of Dr. Badger, and became satisfied that Dr. B. could excel him in filling teeth. During a whole season of very friendly intercourse with Dr. B., he never told me how he filled a tooth. He did impart to me my present mode of introducing gold into fangs, which I have given to the profession years ago, in the *Dental Register*; but I refused to receive any thing from him of that nature, that he was not willing the whole profession should know. I never saw him fill a tooth, nor did he ever describe, in the least particular, his mode of using gold. I saw on his table pieces of gold that were in the form of gold wire, and I understood that he filled teeth by using gold in this form, by cutting off such pieces (from this wire, made from rolled foil) as he needed, of the length required, according to the depth of the cavity.

I commenced preparing my gold, by rolling gold of the length wanted, so that I need not harden the ends by the cutting. I soon caught the principle of cohesion of surfaces in contact, and established my present mode of cylinder filling; and after a year or two found out that Dr. Badger did not fill with cylinders, and that he asserted so himself. That

* There must be some mistake about this, for we have it from good authority, that Dr. Laird has and does use the "rope," "strip," and "pellet" exclusively. One other difficulty occurs to us. Ten years ago, Dr. Spaulding was filling his first teeth under an indenture to Drs. C. S. Miles and Solyman Brown, in Ithica, N. Y., of four years, commencing in the latter part of 1845. If he served out his time, it, at least, could not be very favorable to large discoveries in Ga.—*Editor of the Obturator.*

he packed his gold around the walls, and thrust these sections of cylinders into the centre. Of my whole course in this direction I have much to cheer me, and nothing to explain or regret. But I will say, that it glads me more that my professional brethren have found this useful, and of practical service in their operations, than any thing of a congratulatory nature.

Dr. Allport thinks the profession are pretty well aware who is entitled to the credit of inventing this method of filling teeth, and whoever he is, he enjoys the satisfaction of knowing it.

Dr. Knapp (younger,) says there is nothing before this body to show that Dr. Laird ten years ago filled teeth with cylinders.

Dr. Kennicott says that as long ago as 1820 he saw Dr. Cox in New Orleans fill teeth with cylinders.

He has failed with crystal gold, many times. Not a particle of moisture must touch a gold filling of any kind.

Dr. Honsinger thinks that crystal gold has mostly failed in consequence of having been introduced in too large quantities. He uses very small instruments. Has built up teeth when one-third gone.

Dr. Bogue gives his testimony decidedly in favor of crystal gold.

Dr. Clark has used but little crystal gold, but wishes to know whether the serrated instruments do not fracture the orifice of the cavity, in consequence of their sharpness.

Dr. Perkins—I have some experience in this department of filling with foil.

If any persons will come to Rome, I will show them fillings built up with foil by Dr. Allport 8 years ago, in fine condition now.

I have used Watts' gold from the commencement of his manufacture, and regard it a very useful adjunct to foil. Has recently used about one-third crystal gold.

Does not think a person ought to say that foil cannot be made to perform anything that crystal gold can do. Nor can he assert positively that it can.

He described at length the manner of stopping with crystal gold.

Dr. Clark requested that Dr. Allport would describe his method of stopping with crystal gold.

Dr. Allport could hardly express his gratitude for the kind and flattering compliments which had been bestowed upon him.

Does not use crystal gold exclusively. Foil constitutes about two thirds of his fillings. Sometimes he uses pellets, and cylinders and crystals all in the same cavity. The use of crystal gold requires four times the time for insertion that is required by foil.

Never saves any more of the enamel than is strong and healthy—but saves all the front possible. He presses the crystals in the direction of the length of the tooth as much as possible. Uses serrated instruments, small and sharp.

If a plug gets wet when of foil or pellets, or crystals, it can be cleaned by chloroform and wiped dry with bibulous paper.

The credit due to crystal gold is attributable to Dr. Watts. Since July last his gold has been good, very good—all that is required.

He can build upon a surface after it has been polished, or upon solid metal.

Dr. Spalding explained the reason why serrated instruments packed the crystals in such a manner as to cause them to cohere in a mass, but it must be borne in mind that the serrated points do not push all parts of the crystals with equal solidity, at the polished surface they become nearly so.

Dr. Durham does not think he could stop front teeth better with crystals than with foil; he never allows the force to fall wholly upon one tooth, but introduces a wedge between the teeth, to connect the force with two or more teeth.

The Society next proceeded to the consideration of

Continuous Gum Work.

Dr. Spalding thinks the gum and body may be made strong enough.

Dr. Kennicott gives his word for continuous gum work and esteems it the perfection of artificial teeth.

Dr. Clark is using it pretty extensively, and thinks it occupies an important place in the profession. Deems it as useful as any kind of work that has ever been made. It is artistic in an eminent degree, and is not liable to the objections raised against Gutta Percha, that it lowers the standard of professional skill.

Dr. Spalding assents to all that Dr. Clarke has said in favor of Continuous Gum, yet there is one serious objection, which is the liability of breaking the teeth either in the process of manufacture, or by a fall afterwards, in which case it is a sort of work very difficult to repair.

Dr. Dunham regards the breaking of the gum as a much greater objection than the breaking of the teeth. This he has not been able to avoid.

Dr. Kennicott has seen gum work that nothing else has ever equalled. It can be adapted in color both of gum and teeth to suit the complexion. The frequent heating of this work is very liable to injure the teeth.

Dr. Perkins regarded it as unfit in all cases.

Dr. Smith desired to know whether tobacco did not make Gutta Percha sets very disagreeable. Dr. Clarke replied that a smoker would find his teeth disagreeable.

Dr. Dunham has charged \$75 for sets of Gutta Percha teeth, which is the regular price in St. Louis. Thinks twenty-five of his patients are wearing them comfortably.

Dr. Allport has used it in cases where it answered a very good purpose for temporary work.

Dr. McKellops moved that when the Society adjourn it be to meet the city of St. Louis, on the 3d Wednesday in May next.—Adjourned.

In the evening of the 31st an entertainment was given by the dentists of Chicago at the Briggs Hotel. In addition to the many entertaining and instructive speeches by the members of the Dental profession, Dr. Palmer, one of the professors of the Michigan Medical University, who knows exactly what to say, with decided ability to say what he thinks and wishes in the most fluent and condensed phraseology, made two eloquent addresses, with which the members of the Society and invited guests were greatly delighted.

The Chicago Meeting of the Dental Society of the West will long be remembered with pleasure and profit by those present.

[We are indebted to Dr. Solyman Brown for access to his report of the Chicago Meeting, our manuscript copy of proceedings for the first day's session, from the hands of the reporter, having been lost or mislaid.—*Editor of the Obturator.*]

It is with much pleasure that we are able to present one item of interest occurring at the supper given to the profession, by the dentists of Chicago, in the shape of an outline of his speech on that occasion. It is gratifying to us all to note the appreciation that of late has been shown by some of the best teachers and practitioners of medicine, of our efforts in what we claim to be a kindred profession.—*Editor of Obturator.*

Dr. Brown gave as a sentiment—

The Medical Profession—the primitive stock from which ours arose.

Dr. A. B. Palmer, Professor in the Medical Department of the University of Michigan, one of the editors of the Peninsular Journal of Medicine, &c., &c., being present as an invited guest, was called upon, and in response, said, in substance—That though not entirely unaccustomed to speaking to numbers, he *was unaccustomed* to after dinner speeches, and especially did he find it embarrassing to attempt to make a speech, after such extensive and efficient use as had just been made of his dental pa-

paratus, repaired and made effective as it had been by the very skillful member of this body sitting at the head of the table. He could not, however, refuse to respond to the sentiment just offered to the profession which he loved, and to which he had given, so far, the best energies of his active life.

He was happy in being present on this occasion, and of the opportunity of mingling in sentiment and feeling with the members of the Western Dental Convention. The professions of Medicines and Dentistry were kindred. They had been compared to a parent plant and its offshot, and the comparison was just.

The two professions were similar in several respects. They were kindred in requiring alike an acquaintance with several branches of knowledge—of anatomy, physiology, pathology, and therapeutics; particularly so far as these have relations to the important organs which come especially under the care of those of your fraternity; and if it be regarded as within your province to consider the causes which lead to the decay of the teeth, you are taken over a large range in common with us. Indeed, the health of the general system is essential to the perfection of the teeth, and upon the perfection of these organs, or at least their freedom from disease, depends in no small degree the health of the system. Thus have we many subjects of study in common, and thus are our professions kindred. It is true that the medical profession has a wider range of subjects of study and action—we have more to do with the profound mysteries of life; but as ours has more to do with the secret and hidden, yours is more engaged with the open and apparent, and is, consequently, more positive and certain.

But in another, a higher, and a better sense are our professions kindred. We are alike engaged in the relief of suffering humanity—we are engaged in arresting and repairing the ravages of disease and accident in the human frame—we are engaged in the God-like business of doing good. Healing the sick—restoring the maimed, was no inconsiderate portion of the mission of the Divine Master. This is our mutual occupation, and this should make both of our professions high and noble—should make them liberal and benevolent *professions*, and not mercenary trades.

The advantages of associations like the present—of the bringing together a body of men such as these from distant localities, for the purpose of promoting a common and laudable pursuit, are many and great. There is a free interchange of ideas—the particular modes of practice peculiar to each, are freely presented for the improvement of all. As was said by Dr. Clark, many things were received, as it were, by absorption—

many ideas are unconsciously transposed from one to another by the contact. This reception of ideas by personal intercourse is more effective than by reading. The personal presence of the individual impresses more strongly the fact or the principle he would communicate, and besides this, each would feel a greater interest in what another writes, from having seen and known him.

But the direct increase in knowledge and familiarity with the different modes of practice, are not the only or even the principal advantages. A spirit of improvement is awakened—a desire for advancement is excited—and thus would a higher position be attained. And there was need of inducements of this nature. Popular judgment of professional merit is notoriously erroneous—the noisy pretender often enjoys a larger share of public favor than the more quiet men of merit. A more correct appreciation exists among one's professional brethren. They alone are competent accurately to judge, and of a reputation among those of his own profession, one may justly be proud. These associations tend to establish such reputations, and to induce real improvement for the sake of them. And these advantages are not entirely confined to those who may be present on such occasions, but the impulse will be felt throughout the whole profession. The absent must arouse themselves, or they will be left behind in the march of improvement.

But there were other, and what might be regarded as incidental advantages of these meetings. They afforded the most agreeable, social occasions. There was great pleasure in the extension of agreeable acquaintances, and the union of the States was strengthened by uniting men in a common cause, and bringing them around the same hospitable board, all the way from Wisconsin to Louisiana; and the time might come when all such aids would be needed.

He could not sit down without expressing his gratification at the repudiation he had heard from those present of *secrets* in their profession. In this respect, it should be placed on the same footing with the medical profession. With medical men, no one could maintain a respectable position, who held a secret remedy or a secret process; and dentists owed it to themselves, as members of a liberal profession, to exclude from their communion and fellowship all those who were unwilling that their brethren and suffering humanity should have the full benefit of their discoveries and improvements. On this subject he could not express himself more strongly than he felt. On no other grounds could he recognize the profession of dentistry as kindred with that of medicine.

In conclusion, he would give The Dental Profession, as distinguished from a mercenary trade.

SECOND ANNUAL MEETING OF THE AMERICAN DENTAL CONVENTION.

REPORTED FOR THE SOCIETY, BY WM. HENRY BURR.

THE Association of Dentists organized in August, 1855, under the name of the American Dental Convention, held its Second Annual Meeting at Hope Chapel, New York City, on Wednesday, Thursday, and Friday, August 6th, 7th, and 8th, 1856. The following is a complete list of members present, as furnished by the Secretary :

LIST OF MEMBERS.

MAINE.

S. V. HOWARD, Skowhegan.

NEW HAMPSHIRE.

D. A. STACKPOLE, Dover.
L. W. HALE, Oxford.
A. J. YOUNG, Dover.

MASSACHUSETTS

E. G. TUCKER, Boston.
DR. WILSON, "
D. TRACY, Worcester.
S. P. MILLER, do
THOMAS PALMER, Fitchburg.
C. A. WHITNEY, do
JAS. D. BROWN, do
GEO. L. COOK, Milford.
M. LOOMIS, Cambridgeport.

F. SEARLE, Springfield.
FRANCIS FIELD, Waltham.

CONNECTICUT.

W. J. RIDER, Danbury.
SAMUEL MALLETT, New Haven.
J. B. WHEAT, do
CHARLES MERRITT, Bridgeport.
JAMES S. BARBOUR, Norwalk.
C. M. HOOKER, Litchfield.
LEWIS BETTS, New London.
W. POTTER, Norwich.
H. V. PORTER, Naugatuck.
B. ST JOHN, Wilton.
R. S. REYNOLDS, Waterbury.

RHODE ISLAND.

W. H. SMITH, Newport.
H. H. FARNHAM, Westerly.
F. N. SEABURY, Providence.
W. H. HELM, do

J. H. GITHENS, Philadelphia,
 J. M. BARSTOW, do
 SPENCER ROBERTS, do
 ELISHA TOWNSEND, do
 DANIEL NEALL, do
 J. H. McQUILLEN, do
 C. N. PIERCE, do
 J. W. McCURDY, do
 S. S. WHITE, do
 J. F. B. FLAGG, do
 J. F. FLAGG, do
 DAVID ROBERTS, do
 STEPHEN T. BEALE, do
 ROBERT ARTHUR, do
 C. A. DU BOUCHET, do
 J. LUKINS, do
 R. W. ROBINSON, do
 WILLIAM GORGES, do
 S. G. MARTIN, Meadville.
 DR. CHANDLER, Rochester.
 JESSE C. GREEN, West Chester.
 J. VALLERCAMP, Lelms Grove.
 W. A. CHITTENDEN, Scranton.
 J. MARTIN, Strasburg.
 J. D. WINGATE, Bellefont.
 J. McCALLA, Lancaster.
 F. M. DIXON, Pottsville.

NEW JERSEY

C. A. KINGSBURY, Mt. Holly.
 G. C. BROWN, do
 J. E. PHILLIPS, Burlington.
 J. C. ROBINS, Jersey City.
 B. F. SMITH, Orange.
 W. W. WARD, Newark.
 A. G. P. COLBURN, Newark.
 ALBERT WESTLAKE, do
 W. G. LORD, do
 JOHN HASSELL, do
 CHAS. B. THURSTON, do
 B. W. FRANKLIN, do
 WILLIAM MEAD, do
 G. F. J. COLBURN, do
 G. WHITAKER, Bridgeton.
 JOHN LUM, Patterson,

DELAWARE.

HENRY GARRETT, Wilmington.

MARYLAND.

C. A. HARRIS, Baltimore.
 — BLANDY, do
 P. H. AUSTEN, do
 H. H. HARVEY, Hagerstown.

DIST. OF COLUMBIA.

J. B. GIBBS,
 O. A. DAILY
 O. MUNSON,
 C. H. VAN PATTEN.

VIRGINIA.

JOHN G. COATES, Roanoke.

GEORGIA.

GEORGE ROBERTS, Talbotson.
 ALBERT WILCOX, Savannah.

MISSISSIPPI.

H. C. KENDRICK, Natchez.

LOUISIANA.

J. S. CLARK, New Orleans.

MISSOURI.

JOSIAH FORBES, St. Louis.
 McKILLOPS, do
 G. H. PERINE, do
 AARON BLAKE, do

NEW YORK CITY.

JOHN B. RICH,
 J. H. FOSTER,
 E. J. DUNNING,
 GEO. E. HAWES,
 F. H. CLARKE,
 WILLIAM DALRYMPLE,
 WILLIAM H. DWINELL,
 C. W. BALLARD,
 B. F. MAGUIRE,
 J. G. AMBLER,
 NORMAN W. KINGSLEY,
 T. B. GUNNING,
 GEO. CLAY,
 S. W. JUDSON,
 B. C. LEFLER,
 W. A. BRONSON,
 JOHN ALLEN,
 WILLIAM T. LAROCHE,
 A. L. ROBERTS,
 J. T. VALENTINE
 W. B. ROBERTS,
 C. E. FRANCIS,
 S. A. MAIN,
 GEO. H. WHITE,
 JOHN M. CROWELL,
 C. S. MILES,
 F. H. BURRAS,
 DAVID J. STEINBURG,
 W. T. W. CHAPMAN,
 A. STARR,
 J. H. W. VERE,
 A. J. LETAMENDI,
 A. P. PRETERRE,
 L. BERHARD,
 MAX SAHEL,
 SAMUEL HESSEL,
 E. C. RUSHMORE,
 E. S. WATERS,
 JAMES T. STRATTON,
 BENJAMIN LORD,
 JOHN D. CHEVALIER,
 WILLIAM MICHAELIS,
 A. C. CASTLE,
 CHARLES D. BROWN,

EUGENE P. PRETERRE,
 ROBERT B. SUTTON.

NEW YORK STATE.

JOHN BRANQUE, Brooklyn.
 S. C. FRINK, do
 JONAS W. SMITH, do
 C. A. MARVIN, do
 J. J. DUMON, do
 F. W. DOLBEAR, do
 B. S. LYMAN, do
 R. MCGREGOR, Rochester.
 A. HOOPER, Binghamton.
 L. D. WALTER, Lockport.
 S. T. BARRET, Port Jervis.
 CHARLES MERRY, Herkimer Co.
 A. BLAKESLY, Utica.
 JOHN C. AUSTIN, Albany.
 C. S. WEEKS, Bedford.
 S. B. PALMER, Tully.
 E. H. SYLVESTRE, Lyons.
 DAVID PEABODY, Elmira.
 R. WALKER, Owego.
 A. BLAKE, Aurora.
 G. N. FOSTER, Utica.
 DANIEL SMITH, Hempstead.
 L. W. RODGERS, Utica.
 D. W. PERKINS, Rome.
 STEPHEN MAPES, Fishkill Land.
 N. P. WHITE, Yonkers.
 H. K. WHITE, Utica.
 E. D. FULLER, Peekskill.
 D. C. ESTES, Albany.
 T. H. BRADISH, Utica.
 C. B. FOSTER, Utica.

PENNSYLVANIA.

H. TOWNSEND, Philadelphia.
 T. L. BUCKINGHAM, do
 A. MERRITT ASSAY, do
 JAS. E. GARRETSON, do

ILLINOIS.

T. P. ABELL, Chicago.
 W. W. ALLPORT, do
 S. P. NOBLE, Peora.

MICHIGAN.

M. S. DEAN, Marshall.

INDIANA.

WM. F. MORRILL, New Albany.

OHIO.

CHARLES BONSALE, Cincinnati.
 JAMES TAYLOR, do
 GEO. WATT, do
 WILLIAM M. HUNTER, do
 HENRY B. YOUNG, Zanesville.
 JONATHAN TAFT, Xenia.

CUBA, W. I.

ELIZCO VEDDER, Matanzas.
 W. L. TINKER, Havana.

Dr. JOHN B. RICH, of New York City, President of the Convention, called the meeting to order at 11 o'clock.

Dr. CHARLES BONSALE, of Cincinnati, the Secretary, read the minutes of the last meeting at Philadelphia, by which it appeared that eighty-two gentlemen of the profession were there enrolled as members last year.

Dr. DANIEL NEALL, of Philadelphia, offered the following resolution :

Resolved, That all practicing members of the Dental profession who may be present, and feel desirous of co-operating with us, be considered as, and hereby are, active members of this Convention, and are requested to sign the articles of association at their convenience.

The CHAIR ruled the resolution out of order, and cited the 3d and 4th articles of the Constitution to sustain his decision, as follows :

ART. 3. The Convention shall consist of members of this Convention who shall sign these articles of association, and of such other practitioners of dentistry and auxiliary branches of science as shall hereafter be elected to membership, and in like manner sign these articles.

ART. 4. Candidates for Membership shall be nominated by a member of this Convention at any of its meetings, and every such candidate as shall receive a majority of votes cast upon the question of his admission, shall be declared duly elected.

Dr. J. H. McQUILLEN, of Philadelphia, moved that the above articles be suspended.

Dr. W. H. DWINELLE, of New York, was in favor of the suspension of these articles. He desired the Convention to be an open one, and the platform they should lay down a broad and democratic one, with as little machinery as possible to carry out the ends they had in view. According to the spirit of the articles which they were called upon to suspend, it was necessary that they should go through considerable ceremony, which would greatly retard the business before them. He desired to give their friends who were strictly members of this Convention the right hand of fellowship at once, in order that they might feel entirely at ease. He trusted, therefore, that the motion to suspend these articles would prevail.

The vote was then taken, and the two articles were accordingly suspended.

Dr. NEALL now renewed his resolution. He wished to make the organization the simplest possible, that could keep a body of men together.

Dr. ELISHA TOWNSEND, of Philadelphia, moved to amend by substituting "at liberty" for "requested."

The amendment and resolution as amended were adopted.

Dr. J. M. CROWELL, of New York, inquired if gentlemen engaged in auxiliary branches of the profession were now to be considered as taking part with the Convention.

The CHAIR ruled that they were not—none but practicing dentists.

Dr. C. W. BALLARD, of New York, moved the following resolution :

Resolved. That the gentlemen who have been practicing dentists, and who may be now engaged in the auxiliary branches, be admitted upon the same footing as dentists, or any person the Convention may nominate be admitted as members.

Dr. E. TOWNSEND, of Philadelphia, wished the mover of the resolution to explain what he meant by auxiliary branches. He granted that this Convention, as a body, might receive a great deal of light and knowledge from all the collateral branches of science, which might be called so far auxiliary branches to their

profession ; but the question of admitting members of all the auxiliary branches to a vote in this Convention was quite another matter.

Dr. BALLARD in reply said that he meant precisely that class of persons who were admitted to a seat in the Convention at Philadelphia last year.

Dr. McQUILLEN stated that a prominent editor of a magazine and another person who had been a practicing dentist were elected members last year, while Mr. Abby, a manufacturer of gold foil, was rejected.

Dr. BALLARD said that Mr. Abby was ruled out, and as regards the other gentlemen, his impression was that they signed the Constitution without being voted for.

Dr. L. W. ROGERS, of Utica, thought that the passage of the resolution would be opening the doors of this Convention rather too wide. The words "auxiliary branches" might include all persons who had ever made anything that was used in the practice of dentistry. If there were persons engaged in making teeth, or editing dental journals, who desired to be admitted as members of the Convention, their names could be presented singly to the convention, and the question of their admission then be acted upon. They ought not to adopt a general rule in reference to this matter, for they would then likely be overrun by all kinds of mechanics claiming to occupy seats in the Convention.

Dr. J. S. CLARK, of New Orleans, stated that the gentlemen alluded to by Dr. McQuillen as having been elected members at Philadelphia, were Drs. McCurdy and White, who came in as dentists ; the resolution to admit Mr. Abby was withdrawn.

Dr. BONSALE believed that every member admitted last year was a practicing dentist.

After various amendments offered and suggested, the resolution was shaped so as to admit gentlemen who have been practicing dentists, but are now engaged in auxiliary branches, or any persons that may be nominated and elected as members.

Dr. L. W. ROGERS, of Utica, moved that the resolution be laid on the table. Agreed to.

Dr. S. S. WHITE, of Philadelphia, did not like to lie under the suspicion that himself and partner came into the Convention by permission. When his name was proposed he said he was not a practicing dentist, but, nevertheless, he was elected.

The CHAIR ruled that while none but practicing dentists had a right, by the resolution, to take part in the Convention, those who had already signed the Constitution were not excluded.

Dr. NEALL appealed from the decision of the Chair, and the question being taken on appeal the Chair was sustained in ruling out of the Convention "practitioners of auxiliary branches of science" mentioned in one of the suspended articles of the Constitution.

Dr. F. SEARLE, of Springfield, Mass, moved to restore the suspended articles 3 and 4.

Dr. DWINELLE, of N. Y., said that the words "practical" and "practicing" sounded very much alike, but they were very different. If they adopted the word "practicing" in their admission of persons to seats as members of this Convention, they would exclude very good dentists, who were temporarily out of practice. The resolution ruled them out because they would not be "practicing" dentists, although they might be "practical" dentists. He wanted a greater latitude in this respect than was now allowed by the resolution.

Dr. CLARK, of N. O., stated that, as chairman of the committee that had this matter under advisement, he would explain that the object of the provision in the Constitution was to obtain the assistance of men engaged in collateral sciences, such as chemists, and members of the medical profession.

After some further discussion, the motion to restore was laid on the table, with the understanding that persons who were not practicing dentists should be nominated and voted upon for membership. The following gentlemen were accordingly elected *viva voce* : C. S. Miles, Solymon Brown, J. D. Chevalier, and Robert B. Sutton, all of New York. The admission of Mr. Chevalier was opposed, he being a dental instrument manufacturer, but he was elected by a vote of 17 to 14 on a division.

Dr. JOHN BRANIQUE, of Brooklyn, moved to admit John Kiersing, manufacturer of gold foil and teeth.

The motion was opposed by several members and the candidate rejected.

The CHAIR appointed the following committee to report the order of business for the Convention :

Drs. Clark, La. ; Kendrick, Miss. ; Howard, Me. ; Miller, Mass. ; Helm, R. I. ; Potter, Conn. ; Clark, N. Y. ; Robins, N. J. ; Young, N. H. ; Buckingham, Pa. ; Garretts, Del. ; Harvey, Md. ; E. Henry, Ga. ; McKellops, Mo. ; Allport, Ill. ; Taylor, O. ; Gibbs, D. C. ; Deane, Mich.

Dr. McQUILLEN, of Philadelphia, Corresponding Secretary, being called upon for his report, stated that 2,800 circulars had been printed and sent off to different parts of the Union. He had received various letters but none of sufficient importance to present. Report accepted.

Dr. BONSTALL, Recording Secretary and Treasurer, made the following report :

Amount paid for book and stationery,	\$ 1 10
One hundred copies of <i>Daily Sun</i> , (Phila.)	1 00
Advertising,	1 00
Use of hall,	9 00
Services of janitor,	2 00
Circulars,	63 85
Bills paid by Dr. Rich for cards, canvass, sign, etc.	10 00
	<hr/>
	\$87 95
Amount received,	72 00
	<hr/>
Balance due,	\$15 95

Report accepted.

Dr. CLARK, from the Business Committee, made the following as a partial report of the order of business :

After an address by the President, 1st. Election of officers ; 2d. The pathological condition of diseased dentine, and its treatment ; 3d. Best preparation of gold for filling.

The President remarked that, by the articles of association, it was made his duty to address the Convention upon such subjects as he might deem useful and important for their consideration. This duty he would respectfully decline, as the Convention was composed of those whose collective wisdom it would be

presumption in any individual to advise. He took occasion, however, to report certain expenses which he had incurred in behalf of the Convention for the use of the room, and for a full report of the proceedings. The cost of the room would be \$12, and \$2 for janitor. The cost of a report of the proceedings, supposing it should not exceed a certain amount of matter, would be \$50.

On motion, the report of the Chair was received and adopted.

The next business in order being the election of officers

Dr. F. H. CLARK, of New York, moved that the officers nominated be elected by ballot, and that if no majority was obtained on the first ballot, then the three highest be put in nomination, and that a plurality should elect on the second. Carried, and Drs. Taylor, of Ohio, and Dalrymple, of New York, were appointed tellers.

The following officers were, after balloting, declared elected :

President—CHAPIN A. HARRIS, of Baltimore.

Vice-President—DANIEL NEALL, of Philadelphia.

Recording Secretary—ELISHA TOWNSEND, of Philadelphia.

Corresponding Secretary—W. W. ALLPORT, of Chicago.

On the ballot for President, Dr. Harris received 47 votes; Dr. Neall, 19, and Dr. Rich, 15; scattering, 22. The two latter candidates having declined, Dr. Harris was, on motion, declared unanimously elected.

On the ballot for Vice-President, Dr. Neall received 31 votes; Dr. Dwinelle, 21; Drs. Blakeslee, Taft and Crowell, 6 each; scattering, 14. The three lowest candidates having withdrawn, a formal ballot was taken upon the two highest, when Dr. Neall received 53 votes, and Dr. Dwinelle, 17. The election of Dr. Neall was then, on motion, declared unanimous.

The resolution of Dr. Clark, of New York, was, on motion of Dr. Kendrick, of Natchez, suspended for the election of the secretaries, and all the candidates nominated having declined, except the gentleman named above, they were elected *viva voce*.

The CHAIR appointed Dr. Clark, of New Orleans, and Dr. Townsend, of Philadelphia, a committee to escort the President elect to the chair.

On motion, the Convention took a recess till 4 o'clock.

AFTERNOON SESSION.

The Convention having been called to order, the President elect was escorted to the chair by the committee appointed for that purpose.

Dr. RICH in retiring from the chair, returned his thanks to the Convention for their uniform kindness and support toward him in the discharge of his duties. It was a source of great gratification to him to find that he had always been supported and sustained during his term of office. (Applause.)

Dr. TOWNSEND, of Philadelphia, introduced the President elect as the pioneer of Collegiate Dental Education, not only in this country but throughout the world, and as one of the first who advocated dental association. He felt proud to see him take his place at the head of this democratic convention of dentists. (Applause.) His generosity and good nature were known to every one of them, and his heart, like his body, was large enough to take them all in. (Laughter.)

The PRESIDENT scarcely knew how to thank them for the honor conferred; it was the more gratifying because unsought. He promised to use his best efforts in the discharge of the duties that devolved upon him in a faithful and impartial manner, but having had little experience in presiding over deliberative bodies, he begged their kind indulgence and assistance. (Applause.)

On motion of Dr. Ballard, a vote of thanks was unanimously tendered to Dr. Rich, the retiring President, for the very able manner in which he had discharged his duties.

Dr. RICH thanked them for their appreciation of his efforts.

Dr. CLARK, of New Orleans, was instructed by the committee on business, to report the following resolution:—

Resolved, That in the discussions each member be limited to— minutes.

Motions were severally made to fill the blank with 15, 10 and 5 minutes. The 10 minutes rule prevailed, and

The Convention then took up as the next business in order the subject of the

PATHOLOGICAL CONDITION OF DISEASED DENTINE AND ITS
TREATMENT.

Some hesitation being shown by members about leading off in the discussion,

Dr. CLARK, of New Orleans, suggested that Dr. Geo. Watt, of Cincinnati, read a paper on the subject.

Dr. WATT preferred, as his paper related to remedies, that the pathological condition should be first diseussed.

Dr. JAMES TAYLOR, of Cincinnati, by particular request, opened the diseussion. He considered this as decidedly one of the most important subjects that could be brought before this body. A great deal had been written upon it, but when they came to compare it with their own observations, they found that a great deal had been left unsaid. All disease to be correctly treated, should be perfectly understood; when they could get at the cause of the disease, they were, to a certain extent, prepared to go to work and apply the appropriate remedy. Every individual who had practised the profession, must have noticed that all the conditions of decay were not of a similar character, but presented very different modifications. They often had to deal with excessive sensibility, and generally in connection with that, there was a peculiar physical condition of the disease going on. There were many who did not stop to inquire into the causes producing this certain condition of disease. They could not take it for granted, for instance, that they had the same causes of disease in the sensitive condition of the dentine as they had in cases where there was no sensibility at all. To treat properly these cases, they must necessarily inquire what were the causes producing this difference. He took it for granted that in a healthy condition of the dentine there was a circulation kept up through the dentine itself, and there was not therefore, an excessive sensibility. All the changes which took place then, in this condition of dentine, he regarded as a pathological condition, departing from health. There were three, four or five different kinds of decay; he would speak of three of the most prominent. In the first place, there was the black decay, which had very little sensibility. In this there was a mere deadening of the dentine, a breaking up of the circulation, and a destruction of the vitality, ordinarily without much disintegration of the parts. In the second place, there was the brown decay, in which there was a disintegration of the parts, the living or earthy portion in most cases being entirely destroyed, leaving

the cartilagenous portion in a soft state. Then, there was a third variety, called the white decay, in which more of the cartilagenous portion of the tooth was destroyed than of the earthy part. These three different kinds of decay were certainly caused by different agents, and required very different treatment. In the first, there was very little sensibility, in the second, sometimes a great deal, and in the third, always an excess, unless the case was modified by certain conditions of the secretions of the mouth. The chemical agent which acted upon the cartilagenous parts was certainly different from that which acted upon the living parts. By immersing bone in muriatic acid nearly all the lime would be removed, showing conclusively that a different chemical agent caused the brown decay from that which caused the white. Hence the importance of understanding this subject in order to get at the proper treatment. Even after the best surgery, the organs were liable to further progress of the disease.

Dr. TOWNSEND, of Philadelphia, said that he was here to obtain instruction upon the subject, and therefore, he did not feel authorized in saying a great deal upon the question now under consideration. He had noticed the same conditions of dentine of which the preceding speaker had made mention. He had felt, as doubtless they had all, more or less felt, that when they removed the carious portion of the tooth, they had not done all that he hoped some day to see their profession doing for the patients who should come under their hands. If they did nothing but remove the portions of the tooth which were decayed, and render it mechanically and artificially sound, so far, perhaps, as that particular spot was concerned, they had done their duty; but certainly, they had not made their art a scientific one, unless they looked farther than this, and unless they looked to the prevention in other parts of the mouth of the same effects resulting from the causes which produced the effect in this particular spot which they had carpentered. It was necessary that they should know something more of the pathological condition of the dentine than a great many of them did know. Perhaps they were all deficient in this kind of knowledge, and a good many of them perhaps had been satisfied with merely

the routine practice of cleaning out cavities in the teeth, as if their whole duty to their patients and the dental profession was thereby fulfilled. It reminded him of a remark made by a gentleman to him when he commenced his profession. "So," said he, "I find you have got to be a mouth carpenter."

Very early in his practice he had ascertained these conditions. He found in some cases that this exciting sensibility was almost unbearable, and that the sensibility was, like that of all the other nerves, greatest at the extremities, closest to the enamel or between the enamel and the dentine, and that frequently when he cut in below the sensibility was entirely gone. This sensibility he attributed to inflammation of the dentine, analogous to that produced by a wound in any other part of the body. Accordingly he suggested to an anatomist of considerable skill whether there might not be a circulation in the dentine out entirely to the borders of the enamel, and whether there were not fibrous nerves passing through the whole body of the dentine which caused extreme tenderness in some cases from inflammation. His friend laughed at him, and said that there were no nerves there to become inflamed. He, however, ascertained that in excavating a deep cavity that ran into the medullary membrane the sensibility at the extremities was entirely gone. This proved to him by deduction that the tenderness existed in the branches of nerves that could not be discovered except by a powerful microscope. He had since had the pleasure of seeing these branches of the nerves by means of a microscope, extending out to the enamel, and some instances actually penetrating half way through it, proving his hypothesis correct by actual observation.

He had not found, he was sorry to say, how to correct these diseased conditions. That was a great thing to be discovered and would, if discovered, be what many of them now considered one of the ultimatums of their labors.

DR. DWINELLE, of New York, indorsed the theory of Dr. Townsend. The dentine was ramified by tubuli which lay at right angles with the nerve, as he had seen through a microscope. He had some specimens which he would be happy to show to any member at his office. The tubuli were 1,6,000 or

degree. The exact nature of inflammation of the dentine they all would admit that they did not understand, although the subject was much better understood now than a few years ago. There was much for them yet to learn in regard to the pathological condition of the teeth. It was impossible to ignore this condition, and operate with success upon the decay of the teeth. This condition was modified by various circumstances, by the characteristics of the teeth, by the constitution of the person, and by the action of the agent producing the decay. In many cases the sensibility was only at the point of union with the enamel; sometimes it extended at a particular point within the cavity; sometimes the entire dentine of the crown of the tooth was inflamed, and sometimes it was to be found only within the lamina outside of the cavity. It would be nonsense to apply the same remedy to all these cases. If the inflammation was not stopped the undecayed, as well as the decayed teeth, would partake of the sensibility. There were cases where it was impossible to reduce the sensibility without constitutional change or treatment, and common sense suggested that that treatment should be different.

Dr. McQUILLEN, of Philadelphia, had always questioned applying the term inflammation to that condition; he thought inflammation impossible. Was it possible that tubuli 1-10,000th of an inch in diameter could become the seat of inflammation? The existence of blood-vessels in the dentine he considered a work of supererogation. Could not the circulation go on without the use of blood-vessels? Did we not find a circulation of sap in the vegetable economy, where the vessels absorbed it like a sponge? He conceived that the circulation in the dentine was analogous to that, and if there were no blood-vessels how could there be inflammation? Heat, swelling, tenderness and redness, were described as conditions of inflammation. It was said by some that they had discovered blood in the dentine. If so it was due, in his opinion, to a rupture of adjacent blood-vessels forcing the blood into the tubuli and producing discoloration. The tenderness of the dentine was discovered only when touched by the instrument; in inflammation, pressure upon the part only increased the pain that was already there. It seemed to him,

1.7,000 of an inch in diameter, and were subdivided so as to form little canals or canaliculi. What fluid charged these tubuli was matter of hypothesis; it was probably more subtle than the ordinary gross fluids of the body, something like the electric or neuratic fluid. The most sensitive part of the nervous system was the surface; a scald or burn produced a hundred fold more pain than the severing of a nerve. That seemed to be a law of the animal economy, and it held good in reference to the teeth, the most sensitive part of the teeth being the outer surface of the dentine covered by the enamel, and the most sensitive point of the most sensitive part was where the dentine formed an acute angle with the enamel at the furthest surface. Dr. Maynard, of Washington, several years ago suggested the propriety of severing the tubuli at the lowest point, for the purpose of destroying the sensitiveness. The idea was a philosophical one—to cut them off at the base.

The remarks of Dr. Taylor were correct concerning dental caries. With regard to remedies, he had found the best one to be a solution of chloroform and chloride of zinc, and before the Convention adjourned he hoped to have the privilege of reporting a case of the excision of the superior maxillary in which he used the solution with most happy results.

Dr. D. A. STACKPOLE, of New Hampshire, had examined the tubuli through a microscope, but he was not satisfied that any fluid existed in them. They were there for a wise purpose undoubtedly, but what that purpose was, he conceived was not yet ascertained. He found in his practice that in some instances the nerve extended not only through the dentine, but through the enamel. In some cases they would find that, by rubbing an instrument or the finger nail even upon the enamel, there would be extreme sensibility manifested. A patient, under these circumstances, frequently would ask to have the cavity of the tooth filled, when, in reality, there was no necessity for it. He trusted that this matter would be fairly discussed.

Dr. JONATHAN TAFT, of Xenia, Ohio, said that the condition of the diseased dentine which the dentist most frequently met was an inflamed and sensitive one. This condition was attended with various circumstances, and was various in its character and

therefore, that it was incorrect to call this sensibility, inflammation, and that it was more reasonable to suppose that the pain is induced by impressions made upon the delicate nervous filaments that are in the tubuli. He believed with his friend, Dr. Neall, that the most efficacious remedy was a sharp instrument.

The PRESIDENT, at the suggestion of Dr. Rieh, made a few remarks upon the subject. He had but a single thought that he wished to bring forward at this time, having heretofore in other places said a good deal upon it. Between the dentine and the enamel was a membrane which was termed by Rashkow the preformative membrane; others had termed it the true or persistent membrane of the pulp of the tooth. In his opinion, that membrane performed one more important part than was generally supposed—a different function from any that had ever been ascribed to it. Accident had revealed to him that function. But he would ask to be excused from giving his views upon that subject now, as he was very desirous to meet his family this evening just out of the city, from whom he had been separated for several weeks. He would return to-morrow morning, and would then take great pleasure in stating the result of his discovery.

Dr. NEALL, (Vice President,) accordingly took the chair. He conceived that the dentist ought to know everything of the physiological as well as the pathological conditions of the dentine. He sometimes found it impossible to fill the soundest tooth without making the patient vibrate like a fiddle-string.

Dr. SMITH, of Connecticut, considered all theories and speculation on this subject as of little practical benefit. It was very evident that exalted sensibility was a disease; would any gentleman show us a sure remedy? Some had tried this and some the other thing. He had adopted a very simple remedy. He had been led to believe that the sensibility was communicated through the medium of the gums, because he found that by cutting away the gums a little, he could excavate without pain. He was not sure whether it was imagination, or whether it was that the cutting of the gums caused so much more pain, that

the patient was enabled to submit to the operation so well. He had tried chloroform and ehloride of zine in numerous instances and had produed satisfactory results in, perhaps, one ease out of seven. With ehloroform alone he removed the sensibility for the moment so as to cut away the decay without pain. With ehloride of zine alone he thought he had sometimes received benefit.

Dr. STARWIN, of Norwalk, Conn., had tried all the various remedies, but found them uncertain; and the only thing he could rely upon was a sharp exeavator, and to exeavate close to the enamel. He had found one patient upon whose teeth it was impossible to operate; he was all nerve. Patients who had highly sensitive teeth had generally a disordered system, particularly the bowels. He had been in the habit of preseribing eathartics for such, and after getting the system regulated, he found he could operate with far less sensitiveness on their part. There were cases, however, where he could not remove the sensibility at all. In a ease that he operated upon yesterday where the tooth was extremely sensitive, he had put ether into the cavity, and after half an hour exeavated it and filled the tooth, with a considerable less degree of pain than the patient had suffered heretofore. He however considered it more the effect of the imagination than anything else. Exeavation with a sharp instrument immediately between the enamel and the dentine was the best remedy in his judgment.

A MEMBER asked Dr. S. how long it took to bring the system to the right state by the use of eathartics.

Dr. STARWIN replied, from three days to three months.

Dr. RICH inquired if he left the cavity in the tooth open during the time he was treating the system in the eases where it took three months.

Dr. STARWIN said he did.

Dr. S. V. HOWARD, of Me., had found that an application of pulverized spanish flies would, in some eases, destroy the sensibility in a very short time. He had found, what others probably had observed, that by cutting in a different direction with the exeavator, he could get along with a sensitive patient pretty comfortably in nine eases out of ten.

Dr. F. M. DIXON, of Pottsville, Pa., said that his own experience, he must confess, had been the reverse of that of Dr. Starwin; he had found some of his most nervous and sensitive patients to be those who were the most healthy and whose digestive organs were in a good condition. In regard to this sensibility of the dentine, nature seemed to have been very irregular—more so than in any other part of the system; and the idea had occurred to him that if the nerves were to be found running in different directions in the dentine, some teeth might be less supplied with nerves than others, and some particular parts of the same teeth less supplied than others. And this idea seemed to be borne out by the fact that the dentine was found to be more dense in some parts than others.

The different kinds of decay had been alluded to by Dr. Taylor. He conceived that, perhaps, the cause of these different kinds of decay were attributable more to the condition or structure of the teeth themselves than to anything else. For instance, the white decay was found in very white, chalky teeth, and seldom in teeth of dense structure, which were more commonly affected by black decay. He would merely throw out this suggestion to lead others to make their observations.

On motion of Dr. BONSALL, it was ordered that when the Convention adjourn it be to meet at 10 o'clock to-morrow.

The Convention then adjourned.

SECOND DAY.—MORNING SESSION.

The Convention assembled at 10 o'clock.

Dr. CLARK, from the Business Committee, reported that they had assigned 12 o'clock M. for the reading of a paper, by Dr. Townsend of Philadelphia, on "Professional Fees."

Dr. TOWNSEND, of Philadelphia, announced that a meeting of the American Society of Dental Surgeons was held at 9 o'clock, A. M., and that they refused to consider anything but the business laid over from last year, viz.: the expediency of dissolving the society; and the society voted unanimously in favor of the dissolution. The announcement was received with applause.

DISEASED DENTINE.

This subject being resumed,

Dr. GEO. WATT, of Cincinnati, by express desire of the Convention, read a paper on the subject of the "Action of Pathological Remedies on Inflamed Dentine." He stated that it was written for publication in the *Dental Register*.

Dr. ROBERT ARTHUR, of Philadelphia, said that the question now under consideration had been discussed by their profession over and over again. He had nothing particularly new to say upon the subject. He had listened with a great deal of pleasure to the reading of the paper just presented to the Convention. There was not only a mechanical, but a physiological point of view, in which this question was to be considered. He proposed to present very briefly his views in regard to this matter of inflamed dentine. The condition of dentine, termed sensitive, was not a healthy condition, and was a change from a normal condition. This fact was well established, that although the dentine of a perfectly healthy tooth had a certain degree of sensibility, it was increased when caries set in, and it was exposed to contact with the fluids of the mouth. This was illustrated by the fact that when a carious cavity was prepared for filling, which was slightly sensitive, it became still more so after a lapse of time. The term inflammation, as applied to this condition of the dentine had been objected to; but there was such a vital change in the parts that it was impossible, with their present knowledge upon the subject, to apply any term which would more clearly express the exact condition. Inflammation, so far as they could at present define it, was a local effect produced by the action of agents capable of producing irritation of the parts, a change of the circulation and nervous sensibility. Inflammation was not always accompanied by pain. It might lead to a simple exaltation of sensibility or a nervous irritation of the parts. Their knowledge of the intimate relation of the teeth was very imperfect. It was impossible to state clearly how the vital changes, even in the more vital tissues where vessels could be traced, went on. Whether an increased circulation took place in this part or not, it was impossible in their present state of knowledge to ascertain. It was precisely the

ease with the dentine as it was with any other vital tissue, if it could be protected from the action of irritating agents the sensibility would pass away or be relieved. It was not always possible to do this. Sometimes the caries was exceedingly slight so that it was impossible to obtain a sufficient cavity in which to place any substance to protect it from the destructive agencies. Whenever it could be done, without danger of injury to the pulp, a temporary filling composed of a substance which would resist the action of the fluids of the mouth was sufficient, if the patient could take sufficient time for the parts to become restored to a healthy condition. That fact had been well established, and hence this was one of the most reliable methods of treating exalted sensibility. But in the great majority of cases it could not be done on account of the nearness of the pulp. In these cases escharotic substances, capable of destroying the vitality of the part, might be used with advantage and safety.

Of all the agents used for that purpose known in the profession, that which had been found the most reliable was arsenious acid. The great objection to the use of arsenic was its liability to absorption. Besides the chemical view of this subject, there was another view to be taken. In order that absorption might go on, vitality was necessary. This was evinced in cases of carious bone. Absorption did not take place in a portion of bone deprived of vitality; and this was precisely the case with devitalized dentine; when the superficial layer of the dentine was deprived of vitality by arsenic, it lost its powers of absorption. It was the fact, nevertheless, that in time the arsenious acid would pass through the devitalized dentine to the pulp, but that was simply by infiltration through the layers of the dentine. Such was his view of the matter.

The question then was, how could it be used with safety? Arsenious acid, in his opinion, might be applied with perfect safety, if the cavity of the decayed tooth was a superficial one, and if the arsenic was not allowed to remain too long. The most sensitive parts of the tooth to excavate were those lying nearest the edge of the cavity; and in many of these cases, it was sufficient to protect the thin line of dentine over the pulp by a layer of wax, and then apply the arsenic upon the surfaces

of the cavity. This was not a mere matter of opinion; an experience of some fifteen years justified him in saying that it was a safe and proper remedy if judiciously used. Much had been said against it because of the frequent injury arising from its injudicious use. Still where it could be avoided, of course it should be, and a few sharp cuts of the instrument would remove the difficulty.

Dr. WRIGHT, of Ohio, inquired if he used arsenious acid in combination with anything else?

Dr. ARTHUR said he used arsenious acid alone, and until a few years past he had always used it dry. His usual practice was to allow it to remain ten or twelve hours only to avoid any possible danger. In some cases the sensibility was not destroyed, but rather increased, by one application, in which case a further application was necessary. He had used arsenic in form of cobalt, which was less dangerous; that might remain twenty-four hours. He had never seen any instance of the destruction of the vitality of the tooth, even after the lapse of many years, where arsenious acid or cobalt had been used.

Dr. ROGERS, of Utica, asked if he put in anything to neutralize the acid?

Dr. ARTHUR said he usually did not, but in twenty-four hours he did not fear the penetration of it to any depth.

Dr. ALLPORT, of Chicago, inquired if he put in anything to neutralize the acid before he put in the temporary plug.

Dr. ARTHUR.—Nothing, whatever.

Dr. COLBURN, of Newark, New Jersey, said that with reference to the brown decay, which they all had no doubt found the most sensitive, had made use of mechanical pressure as the surest remedy. He had been more successful with it than with all the applications put together. He applied his finger covered by the napkin to the edge of the gum in contact with the decay and pressed with great force, after which he could excavate successfully in most cases. The decay could generally be removed in a continuous lump. There were some cases, however, in which he could not get at it. He did not conceive the sensitiveness to be conveyed through the tubuli, but through the periosteum. If the sensitiveness was conveyed by the nervous system

through the tubuli, why would not the bottom of the cavity be as sensitive as the top? There seemed to be a sympathy between the edge of the gum at the junction of the enamel and the bony part, and the pressure of the finger nail would usually entirely destroy the sensitiveness. If the finger nail was pressed just below the gum in a healthy mouth, the same sensitiveness would be produced as existed in the case of this disease. He referred only to brown decay on the outer surface of the teeth.

Dr. BALLARD, of New York, thought the gentleman had a peculiar physiological theory of his own.

Dr. COLBURN said he offered the result of his own experience, and the members of the Convention might receive it as they thought fit.

Dr. ROGERS, of Utica, had used arsenic some twelve years ago to destroy pulp, and was induced to use it to destroy dentine where it was extremely sensitive. Previous to doing so he had no knowledge of its being used for that purpose. The operation was successful in destroying sensitiveness. He saw his first work done in this way some three years afterward, but was not quite satisfied with its appearance. He thought it appeared slightly discolored beneath. He had at first used it more as an experiment, but for the last three or four years he had used it with more confidence, and recently having had occasion to inspect some work done three or four years ago where it was used, he found it looking very well indeed.

Dr. RICH inquired if in the first case the discoloration appeared to be in the whole body, or immediately under the filling.

Dr. ROGERS replied that it appeared in the whole body of the tooth; but that was the only case he had discovered with such an appearance, and he was pretty well satisfied that he had not treated it as he ought to have done—that he had allowed the arsenic to remain too long.

Dr. KENDRICK, of Natchez, inquired if he used in that case dry arsenic or in solution?

Dr. ROGERS.—Dry.

Dr. RICH inquired of the gentleman from Newark, how he managed to get his finger-nail under the edges of the gum when

the tooth was very small—if he had his nail sharpened into a point. It seemed to him a mechanical impossibility.

Dr. COLBURN.—When it is a mechanical impossibility, I do not expect to do it. (Laughter.) He had generally, however, been able to accomplish it; if any gentleman had found it different he would like to hear it.

Dr. SEARLE, of Springfield, thought the secret of the effect produced of destroying sensibility was by producing another pain.

Dr. COLBURN admitted that there might be something in that.

Dr. BALLARD, of New York, had during the last four months a family of four young ladies under his care, whose teeth had been treated with arsenic. The dentine was extremely sensitive and the cavities were nearly all superficial. They had lost several teeth, and altogether they had some twenty-seven or twenty-eight teeth whose vitality had been entirely destroyed by the use of arsenic. One of them, he believed, had ten teeth discolored. In two or three instances the nerves had been exposed, but generally the decay was superficial. The teeth had been mostly operated upon two or three years ago with arsenic.

He had great faith in sharp instruments, but he frequently used chloroform and chloride of zinc.

But there was a remedy which had not yet been referred to, though it could hardly be considered a point of practice; it was simply leaving nature herself to perform the cure. If the dentine was simply protected from foreign influences, and left to itself, it would entirely recover its tone. It was necessary in that case to prepare the cavity as carefully as possible, and put in a temporary covering of gutta percha or wax.

Dr. ARTHUR inquired if the dentist who had operated on the teeth of the four young ladies was a skilful one.

Dr. BALLARD said he had a high reputation as an operator and his work was handsomely done. He had understood from them that the arsenic was put in one day and taken out the next.

Dr. FLAGG, of Philadelphia, thought the last speaker rather too sweeping in his remarks against the use of arsenic. It was liable to accident, it was true; but every gentleman of the profession present knew that it could be used with safety in the

hands of a judicious operator. They were much more liable to accidents with that agent, because it was much more active and powerful than any other agent. He would never allow it to remain in the cavity of the tooth longer than five hours at a time, for he considered if it remained longer than that time, it would penetrate the tooth so much as to produce material injury. Some years ago he removed the crowns of four incisor teeth, together with the two cuspidata, for the purpose of inserting artificial crowns. They were most of them very sensitive, and being belated in the operation instead of depending upon an instrument to probe the nerve cavities, the nerves being alive, he made an application of arsenious acid, directing his patient to take it out before she slept, to rinse the mouth, and then apply cotton to the cavities, and return to him in the morning to have the crowns placed upon the roots. He saw nothing of her for two weeks, when she told him that the roots had been so comfortable that she had no occasion to call. He found on removing the little pledget of cotton, that the periosteum of the roots were so far destroyed, that the roots came away in the attempt to remove the cotton. Everything was in a healthy condition previous to his applying the arsenic.

Dr. TAFT, of Ohio, said that when a case of sensitive dentine was presented to them, they must consider the modifying circumstances attending it. The same course of treatment could not be indicated, of course, in all cases. The treatment that would be indicated in the teeth of a young person might not be indicated in the case of an older person, although the same constitutional peculiarities might exist in both cases. When a case was presented to them, they must consider all the circumstances attending it—what were the constitution and age of the patient, the peculiarities of decay, the nature of the agent producing the decay, the amount of sensibility to be allayed, and whether it was of a chronic or acute character. These circumstances should all be considered before they went to work, in order to treat the cases in their hands rationally; and when they had ascertained all these circumstances, they could then indicate the treatment to be adopted. It was always desirable that the dentine should retain its vitality. To accomplish that, sometimes

constitutional treatment was necessary ; in other cases it was sufficient to shield the part from the action of exciting agents. He had found Hill's stopping as good as anything else for temporary filling ; it was more easily applied than gutta percha, would not contract by cooling, and would remain longer in the cavity.

Again, it was sometimes necessary to destroy the sensibility or vitality of a particular part, and at the same time shield the other parts so as to preserve the life of the tooth. It was desirable that all the dentine left should retain its vitality. Some agents would produce the decomposition and death of a thin lamina of dentine without injury to the rest—such as nitrate of silver and chloride of zinc.

Again, it was sometimes required to destroy the vitality of the entire tooth, in which case, arsenious acid was the proper agent. Chloride of zinc acted only on that portion of the living tissue with which it came in contact, and in a very little while it became satiated and would act no further ; and so with nitrate of silver, tannin and creosote, but not so with arsenic. Arsenic was absorbed by both the living and dead dentine by capillary attraction, and conveyed to the periosteum producing suppuration ; hence the necessity of using it with great caution. In many cases, particularly in young persons, where the teeth were highly vascular, it would be improper to use it all. Some twelve years ago he had applied it to a very small cavity in a central incisor of a lady sixteen years of age. It was applied in the evening and in the morning it was removed, and the next day the tooth was excavated and filled. After three days it became slightly painful and appeared of a deep bluish cast, and on removing the filling and drilling into the cavity, he found the pulp dead. The arsenic had remained in the cavity fourteen or fifteen hours.

Being asked if it was not possible that the death of the tooth was caused by mechanical pressure, Dr. Taft replied that he was not aware of any pressure being applied ; the teeth were separated sufficiently by nature.

Dr. CLARK, of New Orleans, said the main question of interest to the profession was not, how they could save their patients

from pain, but how they could preserve the life of the tooth. He was very well satisfied with the direct surgical treatment in all cases of superficial caries. But, to leave this question for a more interesting one. After excavating a deep-seated caries in a large molar or bi-cuspid tooth after a thorough examination of the diseased part by a microscope, he had often been unable to determine whether he ought to remove or treat in order to save the life of the tooth. Leaving aside all minor considerations of pain in excavating, could gentlemen tell him the pathological condition of the dentine when it presented a soft and sometimes discolored appearance, where great care was required to avoid reaching the pulp and ruining the tooth; and could they give him a treatment that would save the life of the tooth? He was very anxious for light upon this point. It had been a matter of serious investigation with him, and he had no doubt he had sacrificed many teeth where they might have been saved—some operating where he should not have done it, and some by postponing the operation.

DENTAL FEES.

According to appointment, Dr. TOWNSEND, of Philadelphia, read a paper on "Dental Fees," which was frequently applauded.

Dr. ROGERS offered a resolution, "That a vote of thanks be given to Dr. Townsend for his very able paper, and that it be published in pamphlet form, to circulate among the members at the expense of the Convention."

A MEMBER asked if the paper was the property of the Convention, Dr. Townsend, or Dr. Clark?

Dr. TOWNSEND believed he had the right of disposing of the paper, and he therefore gave it into the hands of the Convention to do with it as they pleased.

Dr. ROGERS would like that the paper should be published, and offered his resolution in an amended form, so as to order that a certain number of copies (which were left blank) should be published.

Dr. NEALL hoped it would be published, as proposed by other gentlemen, by putting their hands in their pockets.

Dr. TOWNSEND said that in order to defray all expenses, he hoped they would put their hands in their pockets, and stated that the assessment this year for the expenses of the Convention would be three dollars on each member present—that would cover the whole ground. A voice—"We'll do it."

Dr. ROGERS thought the assessment should be on all the members, and not only on those present.

Dr. AMBLER, of New York, hoped a committee would be appointed, not only on the publication of the address, but to endorse its principles. (Applause.) After some further discussion,

Dr. ROGERS read the resolution as amended as follows :

Resolved, That the thanks of the Convention be tendered to Dr. Townsend for his very able and interesting paper, and that a Committee be appointed to take the whole subject into consideration and to recommend such action as may be thought expedient, with reference to the address and the subject of it.

The resolution was carried, and Drs. Taylor, Ballard, and Clark, appointed such Committee. Dr. Rogers having requested to be excused.

A vote of thanks was then passed to Dr. Watt for the able and interesting paper read by him in the morning.

MEMBERSHIP.

On motion of Dr. BALLARD the following resolution was adopted :

Resolved, That this Convention shall consist of all practicing dentists who may desire to take part in its proceedings; and that any clause in the constitution conflicting with this resolution be and hereby is repealed.

DISEASED DENTINE.

The Convention then resumed the subject of the "pathological condition of dentine and its remedial agents."

Dr. TAYLOR, of Cincinnati, considered that he had benefited by the discussion, and that he could congratulate himself that he had been profited by his journey from the West to attend this Convention. As regards the subject under discussion, he had felt the same difficulty that was suggested by Dr. Clark—he

wanted information in regard to the treatment which would save the life of the teeth. For instance, there were teeth in which the decay had almost reached the nerve, so that many would suppose that the nerve was actually reached by it. It was important to know whether the nerve was really exposed before they attempted to operate. The mere fact that very cold water taken into the mouth produced pain, was not a diagnosis that the nerve was exposed, or was in a state requiring to be destroyed. He had repeatedly had patients come into his office, saying that such and such a dentist had refused to operate upon a cavity because the nerve was exposed. He took the ground that whenever by introducing the instrument around under the enamel, they could find sensibility, the nerve was not utterly exposed; there was always in that condition a lamina of bone protecting the pulp, which, if it could be saved by the application of any remedial agent, would preserve the vitality of the tooth. And here the question would present itself, is the dentine in such a state of inflammation as to require the dissolution of the parts, or is it in a state of exalted sensibility? The idea of the blood getting into the dentine was hardly to be entertained, but there certainly was increased circulation. Now he contended that increased circulation was necessary for the proper deposition of bony matter, for the ultimate protection of the pulp. Hence if any remedy could be applied to arrest the decomposition, the tooth might be saved.

The next thing to be considered was, what agents are indicated by which they might accomplish this result? And here he would say that the essay by Dr. Watt closely covered this ground. He had pointed out in that essay certain agents which formed insoluble compounds by which the progress of the disease might be checked until nature had an opportunity to restore the parts to a healthy condition. Upon those remedial agents he (Dr. T.) had predicated his treatment, and he had persevered week after week, and sometimes month after month, in order to preserve the life of the teeth. Great patience and perseverance was required in those cases. He regarded the consideration of these insoluble compounds as an important one. They should be such as not to destroy the dentine itself, and this was the

reason why he used in all such cases, tannin and creosote instead of a chlorine preparation.

In regard to this tender condition of the dentine, he had but one remark to make, and that was, that it would often be found that the patients did not properly control their diet during the treatment. He thought a great deal of difficulty in practice arose from patients not observing a proper diet, by refraining from vinegar and other acids.

Dr. C. A. HARRIS, of Baltimore, (Dr. Neall in the chair,) said, that the question before the Convention for discussion was, the pathological conditions of dentine, and their remedial indications. Only two of these conditions had as yet been noticed. The first was, that peculiar structural alteration, denominated caries, consisting, as is generally believed, in a chemical decomposition of the earthy salts, and partial or complete disorganization of the animal framework of the affected part. This was one of the pathological conditions that had been discussed. The other was exalted sensibility of the dentine, usually termed inflammation. The first of these conditions was the result of the direct action of chemical agents, although it was contended by some writers that inflammation was necessary, and that inflammation and death of the affected part preceded the action of the chemical agents, which produced the structural alteration. That this opinion was incorrect was demonstrated by the fact that long after the decomposition of the earthy salts, sensibility remained in the animal framework, so that, if touched with an instrument, the keenest pang of pain was oftentimes produced, and yet the action of chemical agents had been going on until the earthy salts were completely removed. So, then, it appeared obvious that the disease, or structural alteration was wholly the result of the action of chemical agents.

Where do these agents come from? Were they generated spontaneously in the mouth, or were they eliminated from the remains of particles of alimentary substances lodged in the interstices of the teeth? Doubtless from both sources. According to the tables of elective affinity there were only four acids capable of producing such effects upon the teeth, or in other words which precede the action of phosphoric acid, in their affinity for the

lime which constitute the chief part of the solid ingredients entering into the composition of dentine. But it was well known to dentists and others that all the acids, both vegetable and mineral, did act upon the teeth, but not in the same way. There were only four, perhaps, that were capable of acting chemically, but others, as the muriatic, act as solvents.

The other pathological condition consisted merely in exalted sensibility or inflammation, as it had been oftentimes called, and perhaps very properly, although they might not find all the phenomena present characterizing the disease as exhibited in other parts of the body. This exalted sensibility might depend upon a great variety of circumstances, possibly upon mere constitutional idiosyncrasy, or temperament or habit of body, or upon some peculiar physical condition of the tooth itself. That was a point which had never been satisfactorily determined. They found it in teeth of a very dense structure, as well as in teeth of a chalky texture. They found it in persons in the enjoyment of the best constitutional health, and also in persons laboring under disease, so that it was difficult to determine, with any degree of certainty, upon what this peculiar sensibility depended. He would not take upon himself to determine, although it was known that some conditions of the general system were more favorable to the development of this sensibility than others. Dyspeptic patients were peculiarly liable to it.

There were some other pathological conditions of dentine which had been noticed. One was suppuration, although he believed there was only one example of this upon record. He was disposed to think, from the description which had been given of it, that the writer who had recorded this example was mistaken, and that the earthy salts had been removed by the action of some acid, which had found its way to the part affected, through a fracture in the enamel; the animal framework remaining in a partially disorganized state, the supposed abscess having occurred immediately under the enamel. That was the only example he had found on record.

With regard to the remedial indications of these conditions, it was scarcely necessary for him to say anything, having already in another place, expressed his opinion at considerable length

upon the subject; and more especially as so many gentlemen had spoken upon the subject, and had covered very nearly the whole ground. Yet he might be permitted to add a single remark. In that peculiar pathological condition designated exalted sensibility or inflammation, it was often the case that when the caries had extended only half way from the peripheral surface to the central chamber of the tooth, the painful impressions conveyed through the conducting medium of gold, when the tooth was filled, was such as to give rise to irritation and inflammation of the pulp, which had been known in numerous instances to result in suppuration. He had always succeeded in preventing this painful impression, by the interposition of some non-conductor between the gold and the floor of the cavity in the tooth. Sometimes he had filled the cavity completely with a non-conductor, and permitted it to remain for some weeks or months, when, upon removing it, he had been enabled to fill the tooth without any further apprehension. And in many cases where the nerve was actually exposed, nature employed means to prevent injury by the exudation of coagulable lymph and the formation of callous and osseous structure, very analogous to osteodentine or bone. He had several specimens sent to him by members of the profession, in which the pulp was converted into this substance.

The Convention then took a recess till 4 o'clock, P. M.

AFTERNOON SESSION.

On motion of Dr. Taft, the business committee was retained in office till next year, and was requested in the mean time, to prepare the business.

On motion of the same gentleman, the Convention resolved to close the discussion of the present subject at 5 o'clock.

Dr. CLARK, of New Orleans, wished to settle the use of a term that had been used a great deal during the morning session, and that was "inflammation." He wished to inquire whether inflammation could be considered as anything else primarily than an increased circulation, and whether the other phenomena were not results of that.

The PRESIDENT (Dr. Harris,) stated that that question had

never been very satisfactorily decided by writers upon pathology. There was a great deal of diversity of opinion upon the subject. Inflammation, no doubt, does sometimes occur without tumefaction,—all the other phenomena being present. But still as a general thing there is congestion, as well as an increase of vas-cular action in the affected part. He did not feel prepared to attempt a definition or explanation of a subject about which there still remained so much difference of opinion.

Dr. WATT remarked that inflammation was something more than increased circulation. There was increased circulation in the act of blushing, but no inflammation. In congestive fevers there was an increased amount of blood in the parts, but that was not inflammation.

Dr. CLARK, of New Orleans, said the question was whether the word inflammation could be properly used where increased circulation only was present. There was no redness in the dentine; the red corpuscles of the blood did not ramify it; but there was sensitiveness indicating an abnormal state. He thought it was pretty clearly settled by writers that increased circulation could exist where there was no blood, but other fluid.

Dr. MUNSON, of Washington, thought that in inflammation the gelatinous portions of the blood stopped the free circulation of the red globules, and inflammation was the result.

The PRESIDENT considered this a very difficult question to pronounce positively upon.

Dr. MCQUILLEN, of Philadelphia, considered not altogether a matter of tweedle-dum and tweedle-dee what term was used, as some gentlemen seemed to suppose. He repeated what he had remarked before, that there was but one of the phenomena present in diseased dentine, showing conclusively that the term inflammation was incorrectly applied. He might place his body in contact with fire and get it very warm, but that was not inflammation. None of them ever saw suppuration of the dentine, and dental caries was regarded by few as mortification, but rather as chemical decomposition.

Dr. Watt had suggested the use of nitrate of silver for this

disease. He himself regarded it as a hazardous practice, likely to produce discoloration of the teeth. He had never used it on living teeth, but had found it to produce discoloration on dead teeth. He had seen a case to-day of a permanent discoloration of the skin produced by administering nitrate of silver for epilepsy.

Dr. WATT said that the application of nitrate of silver to any osseous tissue destroyed to a certain depth the vitality—the surface was destroyed and there was nothing more to be apprehended. But it was quite different when taken internally, the oxygen being deposited in the skin.

Dr. CLARK, of New York, had been in the habit of using nitrate of silver to reduce sensitiveness of the dentine for more than twenty years; in fact, the first effort he ever made was with that substance, and he had applied it a thousand times since. He let the nitrate discolor as much as it would and then scraped it out clean, and had never discovered a stain afterwards. He supposed that every dentist used it. He had also found advantage in making a temporary filling of tin or lead, letting it remain for a few weeks, when he found he could excavate much closer. By letting it remain six months he had made some of his finest operations in cases in which he could not have kept the patient quiet enough for a filling of gold at first.

Dr. TAYLOR begged leave to make a remark or two upon this subject of inflammation. Perhaps no two subjects had troubled pathologists more than those of fever and inflammation. They all knew that sometimes both the conditions of inflammation were absent. In acute inflammation increased circulation, no doubt, was the first, primary result, and yet congestion took place shortly afterwards and then diminished circulation. He accepted the definition of Professor Arthur, viz.: An altered state of the circulation with an increase of nervous sensibility. The question then naturally arises, is there an altered circulation in dentine? If so, it followed that with exalted sensibility there was inflammation. The question of the presence of red blood has nothing to do with the definition, in his opinion. If there was increased vitality, circulation, and sensibility, he thought the term was as well applied, and as well defined, as

the word "tissue." It was difficult to define caries; in it was presented some of the actual conditions of mortification and also of gangrene. Caries was an altered, diseased condition of the dentine with the death of the part. Sometimes they had seen caries progressing to a certain point and then becoming checked. Sometimes the softened part was either worn away or thrown off and got rid of, and there was left a hard glossy substance. Now he doubted whether denudition or abrasion could be considered caries: according to his idea caries was an altered, softened condition of the parts where the circulation had been arrested, producing an altered condition of the component parts of the tooth itself.

Dr. S. P. MILLER, of Worcester, said he had used tannic acid alone and in combination with morphine to relieve sensibility. He had sometimes applied it two or three times where the nerve was exposed and then put on a covering and filled the tooth, and he had yet to learn of any ill consequence arising from it. He had also used a composition of five parts arsenic, ten of tannin, and ten of morphine to destroy nerves, leaving it in twenty-four hours for superficial caries. This he supposed they would call mal-practice, but he had been successful in applying it to his own teeth as well as those of others.

Dr. TAYLOR said this reminded him that Dr. Miller had promised to report a case, he would like to hear it now.

Dr. MILLER said he had stated a case to Dr. Taylor, in which he had applied arsenic to his left canine tooth and thought he got along very successfully with it. It so happened, however, that the next day after the conversation with Dr. Taylor, it became very tender so that he could scarcely bear the touch of his tongue to it. He let it go on and at length it commenced getting better, and finally absorption took place, and now it was no longer sensitive—but he could eat with it and it would bear as hard a knock as the one on the other side. But he confessed that he would not try such an experiment on a patient. What he did was this: He told his student to apply arsenic as he could not bear the application of the instrument. Two or three applications were made. Having to leave town for several days, he carried the arsenic in the tooth during the time he was away.

If he had made only one application and attended to it properly he thought he should not have had the trouble he did. He had a constitutional trouble about the teeth, having lost five or six of his lower front teeth by absorption, therefore he did not think his own case a proper test. He had used arsenic for several families with admirable effect. In one of these families he had treated a superior molar of a boy with morphine and tannin some two months, and then filled it. It was last fall. During the winter he found the tooth as sensible in the lower part as if he had never exposed the nerve, and he had had no trouble with it since.

Dr. TOWNSEND, of Philadelphia,—the gentleman admits then that he has destroyed the vitality of his own tooth?

Dr. MILLER.—I do not; it is sensitive to-day to cold and hot water and to the scratch of his finger-nail. It is my purpose to have it bored to see, and I will report upon it hereafter.

Dr. SPENCER ROBERTS, of Philadelphia, said he had applied caustic potash as successfully as most things. Like arsenic it produced inflammation but it passed off with less difficulty. In almost every person they would find at least one or two sensitive teeth. After excavating, he took some ground feldspar and with a piece of soft orange wood, he rubbed around the cavity two or three times to reduce the sensibility. He used chloride of zinc also, as well as caustic potash.

Dr. AUSTIN, of Baltimore, being invited to say something upon the subject, begged leave to decline as he was not now engaged in the practice of this department of dentistry.

Dr. MUNSON, of Washington, had used tannin and morphine as his main remedy. He had such bad luck with arsenic that he abandoned it very early; he thought it was absorbed into the body of the tooth and killed the nerve. He wet tannin and morphine with cold water, and then prepared a solution of gum sandrach in alcohol, about the consistence of cream. Sometimes he first put into the bottom of the cavity a plug of asbestos, and applied the tannin and morphine on top of it, putting in a pledget of cotton wet in a solution of gum sandrach and alcohol, sealing it up and leaving it a number of days. If the tooth was still tender he made the application again. In that way he had usually succeeded in alleviating the pain.

Dr. DWINELLE said, many hypotheses had been suggested—he would like to suggest his. The dentine, as he had already stated, was ramified with tubuli, running at right angles, whose extremities reached out to the enamel, terminating in infinitesimal points. The other extremities opened into the nerve cavity like pipes out of a wall. There was the largest diameter of the tubuli. These tubuli were in all probability filled with some subtle fluid which was a medium for the transmission of sensation throughout the dentine. They were so small that the blood corpuscles could not flow through them. The nerve is encompassed with a sack, and has in conjunction a vein and artery forming a complete circulation, so that if the tooth is ever injected by hydriostatic force, it must be by this investing membrane being injected. Now this increased sensibility of the dentine was found universally to be accompanied by an exalted condition of the nerve, together with a general exaltation of the entire system toward the sensitiveness. This being the case it seemed to him easy to account for the sensitiveness of the dentine without a circulation, strictly speaking, in the tubuli. An exalted condition of the nerve of the tooth implied an injected condition—a superior hydrostatic condition, so to speak, charging more fully than usually the whole tubular structure. This fluid must of necessity be exceedingly subtle, like galvanism, magnetism, electricity or the neuratic fluid. It was the vital principle which converted life with these gross bodies.

BEST PREPARATION OF GOLD FOR FILLING.

Dr. RICH begged the indulgence of the Convention while he corrected an error in the report of the proceedings of the Convention at its meeting last year, as given in the *Dental News Letter*. The subject of conversation being the preparation of cylinders. He was reported thus:—

“Dr. Rich remarked that his preceptor in this country, Dr. Park, taught him to prepare his gold in cylinders, and formed them by rolling the gold over a watch-spring; he then went on to give the method of introducing the gold, describing a plan of forming an open coil of gold, the interstices of which were filled with cylinders.”

That report is incorrect. I said that in the early part of my practice in this city, I had used gold in the form of cylinders or rolls, as they were then styled, and that they were formed by rolling a ribbon of folded gold over a five sided watchmaker's brooch, that the gold so rolled was placed in the cavity endwise, so that it projected some distance out of it, and each roll was packed solid against the wall of the cavity before the next one was introduced. This I stated I had been taught by one of my preceptors, Dr. Park, who filled teeth exclusively by that method, but that I, after using gold in this form for several years, had abandoned it, as being an unsatisfactory method to me. I also stated that while I was using gold in this form, I had originated a method of filling in cases where the cavity had but two or three walls, which method was, to fold a ribbon of gold of such thickness that it would be quite stiff, and of such width that it would project out of the cavity when introduced edgewise. This ribbon was then formed into an open or loose coil resembling in form the main spring of a watch as it comes from the manufacturer. It was then introduced into the cavity edgewise, and opened or unwound until it touched every part of the walls, the interstices were then made as regular as possible, and filled with rolls, made as before described, the coil serving as a frame to keep the rolls in place while they were being packed.

Dr. GUNNING, of New York, suggested that it would be better to take up the subject in the morning.

The CHAIR thought it a pity to lose the time, and Dr. Townsend also hoped the new subject would commence.

It was suggested that each member in order would speak, but as several declined.

Dr. BEALE, of Philadelphia, said he hoped that the members who were now prepared, would be permitted to go on, and let those who were unwilling to speak, wait till to-morrow, when they would be better prepared.

Dr. DWINELLE said that gold foil had accomplished more for dentistry than any other auxiliary. But all things considered, he was now convinced that the best preparation was pure gold in a crystalline condition, and he founded his declaration on

some little experience. While in Europe a few years ago, he had tried several preparations of sponge gold; but that was in an amorphous or unorganized state, and impracticable for filling, while this crystalline gold was highly organized. Soon after returning to this country, he fell in with Dr. Watts, of Utica, who was pursuing a course of experiments in producing the article that he had now perfected, and was all that any one could desire. He (Dr. D.) had acted in concert with Dr. Watts, who had spent thousands of dollars in experiments, supported by his devotion to the interests of the profession, and his honest conviction of the superiority of the article. It was superior to foil in some instances, because it was a more plastic article, more capable of being modeled and built up into desired forms. It could be worked with great facility, and made absolutely solid. This was no mere theory, for he had demonstrated it. He had made fillings of crystalline gold, and after they had been worn in the mouth eighteen months he had taken them out, sent the gold to an analytical chemist to ascertain their specific gravity, and found it equal to that of molten gold. None of his crystalline fillings had disintegrated or absorbed the fluids of the mouth; they were as good and as solid as the day they were first put in, and he expected them to stand fifty years hence, if the patient should live so long. He claimed to do with this article all and more than could be done with foil.

Dr. TOWNSEND, of Philadelphia, said he had worked with foil, for the last twenty-five years he believed, like Dr. Dwinelle. He believed a great many operations could be as well performed with gold foil as with crystalline gold. His friend said that a tooth could be built up into almost any desired shape with crystal gold; so it could with gold foil. The Vice President (Dr. Neall,) had, at this moment, two fillings in his inferior molar teeth which he (Dr. T.) inserted ten or eleven years ago, built up so as to antagonize with his upper ones. He built up the gold, one piece on top of another, welding it on until it was higher than he wanted it. One of these teeth had been in constant use for mastication ever since, and there they both were standing up like two cones. And this was no remarkable case. A year and a half ago he had, with gold foil, built up the crowns

of two teeth with no wall around them, and they had been used for mastication ever since.

And now for his experience in the use of crystal gold. Three years ago he was induced to try it as something with which he could do unheard of things. He experimented several days on it with his fingers to get at the method of manipulating. In the first difficult case he had after that, he used the article, and was perfectly delighted with his success. He went on using it several months, when his patients began to come back. He noted all their cases in a book, and he found the edges of the filling breaking away and disintegration going on. Sometimes the gold had entirely disappeared, and in others he had to take it out. And to make the story short, the two ounces that he had used, to his best knowledge and belief, was all taken out, at least he hoped so, for he felt it his duty as an honest man to refill them with gold foil.

After that a better article, so called, was offered, and he made some experiments with that with a great deal of care, thinking that the defect in his previous work was owing to his bad manipulation. He spent two hours and a half, where he usually spent one on a foil filling. Some of these, so far as he could judge, seemed to have been successful, but his past failures made him afraid of them, and so he took them out. Some were perfect on the outside, but he found caries going on beneath the plug at the margin of the gum. From this want of success he abandoned crystal gold.

Again, on coming to New York, one of his friends who was an ardent admirer of crystal gold, wanted to show him his method of using it. That gentleman accordingly visited him at Philadelphia, bringing with him a newer article, and they spent one whole morning together packing the gold into a tooth which was held in their fingers. His friend pronounced it a perfectly solid filling, equal to molten gold. The next day he took his plugging forceps and with very little pressure pierced it nearly to the bottom of the cavity, and on examining it with the magnifying glass, he found a break around the margin just underneath the crust. Here was a filling put in under the best of circumstances, and packed in with all the force their arms

could exert, and it was not solid. After that, he never had the confidence to try the article.

Dr. J. B. RICH said, that as he was the person who packed the filling referred to by Dr. Townsend, it was proper that he should reply at this time to the statements just made, as the case was unfairly stated. In the first place, the filling was not put in the cavity under favorable circumstances; and instead of a whole morning, there was not more than an hour and a half spent upon it, including the talking and explanations, although it was a large cavity in the antagonizing surface of a molar. Dr. Townsend with his fingers only, held the tooth upright upon the arm of his operating chair, so that it was impossible to prevent its having more or less motion. He (Dr. R.) inserted the filling while the tooth was thus held, with instruments that were imperfect, they being mere pieces of wire without handles, which he had taken there to show the points he used, and his mode of packing this kind of gold, but they were not at all suitable to pack the gold hard, they could not be held firm enough in the hand to exert any force with them. And he recollected distinctly stating to Dr. Townsend that that experiment was not intended as an illustration of the degree of density that could be attained, as the tooth could not be held steadily enough for that purpose. As relates to the Dr. piercing the filling with the plugging forceps, that fact does not amount to anything, as there was no attempt made to render it a dense one, the principal object being to show the adhesiveness of this form of gold. The crust that Dr. Townsend speaks of as having pierced through, was produced by burnishing the surface, not by packing. He had stated the circumstance exactly as it occurred and he would leave it to the judgment of even the most prejudiced, to decide if this was a fair experiment. He would insist, moreover, that it was not only unjust, but unbecoming in those who have any pretensions to scientific attainments, to pronounce crystal gold inferior to gold foil, upon the strength of the imperfect experiments they have made with it. If we question those closely who pronounce against crystal gold, we find that they have done so after a few trials, made generally with instruments of a different pattern from those they are accustomed to use, and before

they have acquired any skill or practice in the manipulation of this form of gold. And this too, after they have been told over and over again, by those who claim to have used it successfully, that from the peculiar mode of manipulation, it is necessary to follow, in packing it; a considerable amount of education and practice is absolutely necessary before any success can be obtained. No person would pretend to have learned to make good fillings with foil in as short a time as these gentlemen have spent in their experiments with crystal gold. He (Dr. R.) would aver that crystal gold could be packed in the mouth as solid as a piece of gold plate. It had been done again and again. And the margin and every part of the filling can in all cases be made as firm and solid as they can possibly be made when formed of foil, and with a less amount of pressure. And when one has become skilled in its use, there are many cases where it can be packed with much greater facility than foil. By pressure applied with an ordinary filling instrument it had been made to enter into the very substance of the dentine, so that when portions of the bone were broken away from the filling, the gold adhered to it, and upon its being submitted to the microscope, the dentine presented an appearance similar to a piece of quartz, with particles of gold in it; the gold being actually imbedded in the tubuli of the dentine. Now who will pretend to say that a filling put in a cavity in the manner that that was, could be permeated by any fluid. In some of the cavities he had filled, as experiments, he had broken portions of the tooth away from the fillings, and upon examining the surface of the gold so exposed, he had found that it had received as perfect and sharp an impression of the walls of the cavity, as could have been taken by either gutta percha or sulphur. This is more than can be claimed for foil, and shows how utterly impossible it would be, for fluids to penetrate between the filling and the wall of the cavity, when the gold is properly packed.

Many persons, in making experiments with this gold, have used instruments entirely different in shape from those they use in packing foil,—this is one of the causes of their failure. The only change necessary to be made is in the points of the instru-

ments, which, for crystal gold, requires to be dentated, so as to present a surface of sharp points. Another cause of failure, is the attempt to use this gold in difficult cases before having acquired skill in its use. Let those who wish to experiment with it, confine their effort to plain, simple cases, until they have become thoroughly acquainted with its peculiarities, then let them try it in the difficult cases. He (Dr. Rich) had used it exclusively for the last thirteen months, and his good opinion of it increased every day.

Dr. BALLARD inquired of Dr. Townsend, how much crystalline gold he had used in all, in the mouth.

Dr. TOWNSEND said about two ounces.

Dr. BALLARD asked the same question of Dr. Dwinelle.

Dr. DWINELLE had used it exclusively for two years, and nearly so for three years. He could say he had used pounds of it. He had sometimes used an eighth of an ounce a day.

Dr. TOWNSEND said he had not intended in the remarks he made, to object to any gentleman's using the article ; in fact, he would be glad to use it himself, if he could produce better results, even if it cost him more time. He was open to conviction, and success would afford him great pleasure.

Dr. BALLARD asked Dr. Rich how much he had used.

Dr. RICH replied, some five or six ounces.

Dr. S. A. MAIN, of New York, remarked, that in 1850, he made some crystalline gold for an experiment. He failed to get it perfected, nor had he seen any up to the present day that was perfect. The same trouble that he found then he had found since. He had found two evils to arise from its use : first, while the outer surface of the filling with sponge gold was most beautiful, upon splitting or sawing the filling into two, the inner surface was quite different ; and second, he had never been able to pack it so as to make an even joining surface with the sharp edges of the cavity. He wished any one to tell him if he could pack a piece of crystal gold into indentations made with a file, in hard gold ; or if he could exhibit an instrument with which it could be packed into every corner of the cavity as they could pack gold foil. He could make crystal gold with nitro muriatic acid, but it was a mistake to suppose that it was pure ; if any

one had succeeded in making it pure, he would say, bless the man who did it.

DR. DWINELLE said that Dr. Mains' remarks did not apply to crystal gold, as now manufactured, but to another quite different article formed by its being dissolved in muriatic acid and then precipitated, a process discovered by Dr. Jackson, of Boston, who experimented a number of years with it. That had been discarded as worthless, and the article now manufactured by an entirely different process contained 999 and a fraction part of pure gold out of a 1000.

DR. TOWNSEND remarked that the very article which he first used, and which was afterward condemned, was assayed at the mint in Philadelphia, and found to contain $999\frac{3}{10}$ parts of pure gold out of 1000.

DR. DWINELLE said it was not condemned for its impurity, but on account of the imperfect manner in which it was manufactured.

DR. ALLPORT said he had received a letter from Dr. Watts some days ago, in which he authorized him to offer \$100 to any dentist who would take his present crystal gold, and put it through a chemical test, and detect the least trace of muriatic acid in it.

DR. BALLARD had seen the article made from gold coin, and he could assure the Convention, that no mercury or other metal was used in its manufacture, which at present was kept a secret. He only wished he could state more facts concerning it.

DR. DWINELLE wished to dispose of the muriatic acid, Dr. Ballard having disposed of the mercury. Before the article was completed for the market, it was placed in long cylinders of glass, where it was washed with distilled water until the severest chemical tests indicated that there was not a particle of acid in gallons of the water, when, to make assurances doubly sure, a stream of water was turned on, and allowed to pass through it for twenty-four hours.

On motion, the Convention then adjourned till 9 o'clock tomorrow.

EVENINGS' ENTERTAINMENT.

In the evening a splendid supper was given at the Astor House, to the members of the Convention, by the firm of Messrs. Jones, White & McCurdy, manufacturers of teeth, &c. About 350 members sat down, and Messrs. McCurdy & White each made an excellent speech, the former welcoming the members to New York, and the latter giving a foreible dissertation on the union of the Science and Art of Dentistry in their æsthetical as well as their physical relations. The company did not separate till after midnight.

Mr. McCURDY'S welcome speech was as follows :—

GENTLEMEN.—In the name of the firm of Jones, White & McCurdy, you have been invited to this entertainment.

I beg your indulgence while I say a few words of an entirely personal nature.

In the winter of 1845-6 we commenced the manufacture of dental instruments in Philadelphia, and early in the spring of '46 we opened in this city a dental depot in connection with the one already under way in Philadelphia.

We had the assurance from some gentlemen in the profession that we would succeed, and we determined that no effort on our part should be wanting to deserve success. How we have carried out this resolve we leave for you to say; but this much we will say, that whether deserved or not, we have been sustained beyond our most sanguine expectations, and we are now in the enjoyment of a larger business than at any former period.

Success in business life is not reliable evidence that such is deserved or merited; but we have it in our power to say that the confidence placed in us by those with whom we have business relations, has cheered us greatly, and induces the hope that we have their approbation and best wishes for our success.

This confidence, the basis of all business enterprise in connection with strict integrity and purity of purpose, and an inexorable determination to do right and to be right, we have labored to secure by giving assurance that self-interest would never warp our judgment, or desire for gain induce deception in any form, or to any extent whatever. Such were the principles we laid

down for our guidance, and an approving conscience and the confidence of the profession have been our reward.

And now, gentlemen, without any further detention, as a very trifling evidence of our feelings toward you and to the profession generally, we tender you this complimentary supper.

Mr. S. S. WHITE, of the firm of Jones, White & McCurdy, replied to the third regular toast (The union of the Science and Art of Dentistry, in their æsthetical as well as their physical relations) as follows:—

GENTLEMEN.—I most heartily greet you on the present occasion, and deem myself most fortunate in meeting with so many earnest workers in the cause of truth.

I congratulate you on the opportunities presented this week, for a free interchange of thought, and of acquiring better ideas of what the age, and our department requires of us. Or rather since nothing is justly required which is not due, with better ideas of what we owe to our calling, for as Lord Bacon has truly remarked, every man owes a debt to his profession.

There is such a thing as an account current, between every department of life and humanity at large, and to carry out the figure, our special object in association, is to get posted up, to see how much of that debt is unpaid, that we may double our exertions to cancel it.

A slight consideration of the past and present condition of dentistry, will afford gratifying evidence of the great advancement which has been made therein, and especially in recent times, yet, notwithstanding so much has been accomplished, much more remains to be done, and a brief reference to one of many subjects requiring attention, may not be inappropriate on this occasion.

Thus far, if we except the earliest efforts in dentistry, the attention of the profession has been chiefly directed to the construction of a useful, mechanical apparatus, to supply, in some measure, the loss of the natural organs, wholly neglecting, or but slightly estimating, the beautiful or more properly æsthetical.

Though recently, it is thought to be more scientific to preserve the natural than to construct an artificial substitute of the value

of this branch, happily denominated conservative dentistry, there can be no doubt, as the natural must always be superior to the artificial. Still, as there must always be more or less necessity for the artificial, the object should be to carry it to the highest degree of perfection possible, and to do this we must study it in its various relations.

It is obvious that utility, beauty and symmetry, or general adaptation, must go together, or be combined in the artificial as they are in the natural ; and this truth is more fully appreciated at the present than it has been at any other time, yet I conceive not so fully in all its relations as it deserves.

This branch of the profession, which may be called æsthetic dentistry, is not limited to the mere adaptation of the artificial denture to the mouth and face, but extends its relations to the organism as a whole, and not only to the physical, but to the mental peculiarities of the individual organism, and even still further, to classes of individuals.

To render this general relation more obvious, I have merely to refer to the familiar fact, that naturalists are able, from a mere fragment of a tooth or a scale, to trace the peculiar characteristics of the particular animal to which they belonged, even though they had been long extinct. This knowledge has been acquired only by prolonged and laborious research, and the combined efforts of many minds. It however shows, how much may be accomplished by earnest, systematic and associated effort. If, therefore, each one interested in the cause of dentistry, would more earnestly engage in observing, classifying and recording the special peculiarities of the dental apparatus, in individuals of both sexes, of all ages, habits and temperaments, and endeavor to trace their relation to the whole organism, and to man in general, very much might be added to our present knowledge. I can truly say, that in our own department, every effort will be made to attain the highest degree of perfection, as our ideal is far, very far, beyond anything which has yet been accomplished : but I fear that I have already trespassed on both your time and patience, and will, therefore, conclude with the following sentiment :—

May the fraternal feelings so pleasantly manifested at the

meetings of the American Dental Convention, increase until the whole profession are united in the bonds of brotherhood. (Applause.)

THIRD DAY.—MORNING SESSION.

The Convention met at 9 o'clock.

Dr. TAFT moved to close the discussion on "The best preparation of gold for filling teeth," at twelve o'clock, which was carried.

Dr. DIXON, of Pottsville, remarked that the impression left on his mind by the discussion last evening, was this: That those who had been in the habit for years of using gold foil could make a better filling with it than they could with crystalline gold, while those who had used the crystalline gold to a great extent could make the best fillings with that. He objected to the shifting from one substance to another by the profession at large, in order to arrive at conclusions as to the best preparation for filling teeth. Was it not better to leave the experimenting to those who had turned their attention exclusively to some particular preparation. He must confess that, so far as the use of crystalline gold was concerned, he had a very limited experience. He preferred foil, but thought any dentist could do best by using the preparation to which he was most accustomed. He had seen gold foil fillings which could not be excelled, and instanced one that came under his notice, done by Dr. Townsend. It became necessary to take it out, and he found it as hard as amalgam. It was difficult to prevent fillings from becoming moist, but a good filling could be made with foil, even if it does become a little damp.

Dr. W. B. ROBERTS, of New York, said that there were radicals in the dental profession, as well as in politics. He had tried everything for filling, and he had found that in some cases, sponge or crystalline gold could be used where foil could not be used as well, while in other cases foil was best adapted. He practiced on the eclectic principle in this respect.

Dr. C. A. KINGSBURY, of Mt. Holly, N. J., knew of only two preparations of gold for filling teeth, in the form of foil and sponge gold. The question ought more properly to read, which

was the best of the two? Both preparations were good. He had been using gold in the form of foil for seventeen years. The crystal gold used at present was very different from the sponge gold first used by the profession. He had seen many cases of operations by dentists who had filled teeth with sponge gold, and he found that a large number of them had proved an entire failure. After being in the teeth a few months, he had found this sponge gold in a very porous and disintegrated state, and he had often found it necessary in these cases, for the preservation of the teeth, to remove the fillings and refill them with gold foil. Most excellent fillings could be made, however, with the crystal gold now used. He had used over an ounce of it making some fillings that gave him satisfaction. He thought there was a disposition to ascribe too much to one article to the exclusion of the other; it was yet to be decided, he thought, which was the best of the two.

He differed from Dr. Dixon in relation to experimenting. In the language of Liebig, nature speaks to us in a peculiar language; she answers at all times the questions we put to her, and such questions are experiments. An experiment is the expression of a thought; we are near the truth when the phenomena elicited by the experiment are corresponding to it, and when the reverse is the result, we may take it for granted that the question is falsely stated and the conception founded in error. He believed thorough experimenting was the only course to arrive at truth.

Dr. Dixon said that in speaking of experiment, he meant to refer to that flood of experiment which some seemed disposed to indulge in. He was glad to see these experiments made in a proper way, and hoped they would be continued.

Dr. T. L. BUCKINGHAM, of Philadelphia, suggested that he would like to hear some one tell how to use crystalline gold. There were annealed gold, cylinders, pellets, ropes, and ribbons, each requiring a peculiar manipulation. They had been told that sponge gold was the very best article, but no one had given them a description of the manner in which to use it. He must confess that he had failed, in most cases, in attempting to use it.

It was said that it could be welded together and made perfectly solid. What was meant by the term solid? It was applied to metals to indicate a peculiar cohesive, crystalline structure. It was no evidence because you had the largest amount of matter in a given bulk that the particles were cohesive. Ice occupies a larger space than water, but is much more cohesive? We know nothing about the nature of cohesive attraction except the effects produced. Certain metals in a pure state were capable of being welded without heat. Could they weld particles of gold so as to become perfectly hard and cohesive? Wet clay could be compressed so as to have more material in the same bulk than was contained in a burnt brick, and yet the clay was held together by mechanical adhesion, and the brick by cohesive attraction. This was mere theory, but it deserved attention, for in applying this sponge gold in his own practice, though the fillings appeared to be solid, they had broken down and washed away like clay. Were not the particles therefore held together by the same force as pressed clay? Did it not require vitrefaction or fusion to make the gold solid? The process of annealing was done by means of a high temperature; might not the heat cause a change in the arrangement of the particles by which the attraction of cohesion was increased? Even at a low temperature, gold by rolling was rendered stiff and hard; heated in the fire and it became soft again. His own opinion was that they could not weld crystalline gold by the process of filling. He had seen fillings of this material where the surface was not burnished, absorb repeatedly drops of moisture. He believed he had not been deceived in that experiment. If that was so, would not moisture penetrate the whole lump and break it up? It was possible that it might be held together by the interlocking of the crystalline particles of gold, the same as gold foil when packed into a cavity.

Dr. C. S. WEEKS, of Bedford, N. Y., had used crystalline gold but little. His first attempt three years ago with sponge gold was a total failure. About a year since he began to use the new crystalline gold, and after several unsuccessful attempts he at last succeeded in some kinds of cavities. He found great difficulty in keeping some cavities dry, but where they were

shallow and easily accessible, he could make a better filling than with foil, while with deep cavities not easily got at, he could succeed better with foil.

Dr. AUSTIN, of Baltimore, said that if a crystalline gold filling when subjected to the test was malleable and ductile, it was therefore held together by an equally powerful force with that called cohesion, and it mattered not whether it was aetnal cohesive attraction or not. If crystal gold could be made as compact as coin it was a new discovery. He did not regard the illustration of the burnt brick and compressed clay as hardly in point. Before going into the fire the elementary substances were in a state very different from what they were on coming out; the silica and alumina became a new chemical compound which possessed cohesive attraction. Reduce that brick to powder, and it was no longer cohesive, or capable of as much cohesion as the clay—in fact, it was not clay, it was brick dust. If a plug of crystalline gold could be rolled out into a thin plate, and drawn into wire, and having the same specific gravity, it followed that it was as solid as coin. Because metals needed annealing, it did not follow that they were not as solid as before. There was some mysterious agency in heat, but he could not see how a crystal gold plug differed essentially from molten gold, if the specific gravity was the same.

Dr. A. MERITT ASSAY, of Philadelphia, gave an account of some experiments made by him, corroborating the remarks of the last speaker, and showing that crystalized gold became solidified in the cavity. He had tested a filling made with sponge gold by the hammer and rollers making it into a very thin plate. He happened to have that specimen in his pocket-book, which he exhibited to the Convention. He had used probably some six ounces of sponge gold and had yet to see the first discoloration of a tooth. He had used it in cavities where without it he was sure he would have been obliged either to use amalgam or extract the tooth. He intended to use it more freely hereafter. No more difficulty attended the use of it than in the case of gold foil. Great care in either case was required to keep the cavity dry; a wet filling of sponge gold would in time peel off or crumble just as a wet filling of foil would do.

Instead of using the sponge gold in little round pieces, he thought it should be applied in flat pieces and packed with an instrument much finer than those made by the manufacturers. He ground his instruments off and serrated them to suit himself.

Dr. WATT, of Ohio, rose to correct the statement of Dr. Buckingham about the impossibility of welding gold except by heat. Gold was one of the welding metals without heat, as every worker in it knew.

Dr. RICH stated that not only gold, but tin and lead, were weldable when cold.

Dr. GEORGE C. WHITE, of New York, said it was but recently that their attention had been called to crystal gold for filling. They knew, on the other hand, that foil had been used from the beginning of dentistry. They had seen what others had done in the use of foil—that fillings had been inserted in the teeth, and had preserved them for generations. On the other hand, fillings had been introduced by other persons, which it had been necessary to renew from year to year, until finally the teeth themselves were destroyed. Two points were necessary to be reached in filling the teeth: first, thoroughness of operation; and second, skilfulness of manipulation. With these two, any honest man could succeed, either with foil or crystal gold.

Dr. CLARK, of New Orleans, thought that if foil was properly used, and its properties were correctly understood, it would accomplish what every honest dentist would desire to accomplish, the preservation of the teeth. He would undertake to build up a five-cent piece into the shape of a thimble by gold foil of even layers and straight, smooth laminae, with the pressure of five pounds only, applied with a single point, and any gentleman here could do the same. Still he was much interested in sponge gold, thinking it might be a valuable adjunct to foil. They could do wonderful things with foil, but there seem to be properties in sponge gold not possessed by any other material. He could not say that he could do everything with foil that could be done with sponge gold. There were certain properties about the use of well prepared crystal gold that led him to believe that there were cases which could be treated with more facility by its use than gold foil. He related an achievement of Dr. Allport, of

Chicago, in restoring the exterior and cutting edge of teeth, which to him was more gratifying to look upon than the productions of a Raphael. The front incisors were separated as if a file had been passed between them a quarter of an inch thick, nearly down to the gum. These teeth had been built up and restored to their original shape, their approximate edges almost touched, and they were perfectly adapted to mastication. They had been used nineteen months. He understood that Dr. Allport used foil in connection with crystalline gold in the same cavities. He intended when he went home to try the article.

Dr. ALLPORT having been solicited to state how he proceeded to fill teeth in such cases as these, said that he generally used crystal gold entirely; yet in many difficult cases, for instance, in building up a tooth where two sides were standing, he used more cylinder than crystal gold. He conceived that foil could not be used in particular cases as successfully as crystal. Miracles almost had been performed with gold foil. He had seen fillings made by Dr. Blakesly, of Utica, thirty-five years ago, as perfect now as then, so far as the preservation of the teeth was concerned. One great desideratum in all operations was the saving of time; in this respect he did not regard crystals as advantageous as foil. In many cases he could save one-third or one-half the time with foil. He used also pellets for cases where they seemed better adapted. In this respect every one must use his own judgment; the great thing in filling teeth was the exercise of good sterling common sense. It required more time to learn to use crystal gold, in his judgment, than foil. It required months of hard labor to learn to fill a tooth with gold foil properly, and it required more to learn to do it with crystal gold. But when the art of using it was once acquired, more could be accomplished with it than with foil.

It was said that crystal gold fillings would break down, and that the bottom of the cavities would become soft. Last January he had filled a superior canine tooth with crystal gold; the whole of the bone of the tooth was gone, there being nothing left but the enamel, and that so thin, that when excavating the cavity the instrument could be seen through it. This filling was worn until April, when the crown was broken off, by biting upon

something hard, and came away in pieces, leaving some fragments of the tooth remaining. He saw that tooth two or three days ago, when he filed the edges where the filling came in contact with the enamel, and polished them. There that plug remained to-day, perfect for all the purposes of mastication. He cited this to show that crystal gold would not crumble, if it even did, it was owing not so much to the gold as to the manner of using it. And here he would remark, that much of Dr. Watt's gold made previous to the last year was bad, and even now he regretted to say, much of it was not what could be desired; though it was said to be all alike, there was a difference from some cause or other. The difference was in the working properties, some would adhere almost instantly, while other portions would not.

Dr. SEABURY used more foil than crystalline gold, but in certain cases he knew he could accomplish what he could not with foil. Dr. Allport expressed his experience.

Dr. ARTHUR, of Philadelphia, had in various times and places borne testimony to sponge gold, and had not yet ever any reason to change his opinion. Any failures in his operations he could attribute to some defect of manipulation or some other circumstance which made it exceedingly difficult to perform a good operation. Though some of the fillings were after a lapse of time, not perfectly satisfactory in appearance, yet even then, there was no discoloration below the surface, and no diminution of the density of the filling.

But he no longer used sponge gold; its use had led him to the discovery of an entirely different method of operating from what he had previously pursued, and he had since used gold foil in an entirely different manner. He had been told by a number of gentlemen that this was no new thing, that they had been in the habit of depending upon the adhesive quality of gold foil for years. Such had not been the case with him and many others that he knew. A great many manufacturers of gold foil had been led to make an effort to avoid the objection of the want of an adhesive quality, which prevented making a good operation when used in the ordinary way. But he was assured by gentlemen who had worked in gold foil, that it was only

necessary to produce a perfectly pure article of gold, to possess without annealing this strong adhesive quality, so that it could be welded together in a solid mass like sponge gold. If therefore gold foil could be made to adhere in the same manner as sponge gold, why could it not be used in the same manner and with the same results? Every manufacturer, he had been told, could make it with this adhesive quality, and it could be used precisely as sponge gold, with the exception that the instrument should be somewhat sharply serrated and somewhat more hardened. It was well known that gold foil, no matter how adhesive in the beginning, in a very short time, if exposed to the atmosphere, would lose this adhesive property. But this change which was confined entirely to the surface, could be entirely removed, and the gold restored to its original condition by subjecting it to a very moderate heat—something short of a red heat—ordinarily called annealing. It was only necessary to place it upon a plate and hold it over a spirit lamp until the plate becomes hot. In an article published by a prominent writer on electric metallurgy, it was stated that any metal held in a current of air becomes covered with a film of air, and that it is impossible to get a galvanic deposit upon that surface until it is exposed to heat. It could not be a film of moisture because a sheet of paper could be passed into water and removed perfectly dry. He had endeavored to call the attention of the profession to this method of using gold foil, and a number about Philadelphia were now using it to the exclusion of every other, and said that no inducement could bring them back to any other material. Dr. A. referred to an operation performed by Dr. Colwell, where foil was used in an upper molar tooth, with nothing remaining but the interior surface and a small portion of the outer wall, the most beautiful operation he ever saw, which could not be surpassed by the use of crystal gold.

Dr. MILLER, of Massachusetts, said that he had some experience in the use of crystal gold, and he regarded it as a very valuable auxiliary to the profession. He had no doubt that this form of gold did possess valuable qualities, for upon that subject, they had been enlightened with the discoveries of men of experience and learning. He had used sponge gold and eylin-

ders in combination, and they worked well together under certain circumstances. He was an eclectic himself, and used the best material at his command adapted to suit the particular case in hand. When a new thing was introduced into the profession he investigated its merits, and adopted whatever he found to be valuable about it. He knew of no other way to perfect success. Life was made up of experiments. If objection was made to experimenting, it would cut off all improvement. His object in the practice of his profession was, to make a thorough examination of all new discoveries in the line of his art, and adopt whatever was practical and valuable.

Dr. SEARLE, of Springfield, mentioned a case of Dr. Arthur's that came under his notice, where a superior bi-cuspid with only the outer half of the crown remaining, was built up so that it articulated perfectly with the lower one.

In regard to cylinders, he had used them for twelve years. Dr. Clark had said at Philadelphia, that he was the original discoverer, and he had no doubt he was *an* original discoverer.

Dr. CLARK, of New Orleans, said he borrowed the idea from Dr. F. H. Badger, supposing that he used them entirely. Dr. B. would not state how he did it, but he (Dr. C.) went to work to find out, and as he thought discovered it. He shortly afterwards found that Dr. Badger repudiated the idea entirely that teeth could be filled with cylinders alone, saying that he only used them in the centre of the cavity. He did not claim any original discovery and never had. What he had learned, he gave freely to the profession, as it was every man's duty to do.

Dr. SEARLE did not himself claim any originality; the idea came to him in 1840, through a student of Dr. Keep, of Boston.

Dr. HESSEL, of New York, had not yet seen any better work done with crystal gold than could be done by the same operators with foil. He was one of the earliest to experiment in the use of sponge gold. He manufactured it himself in the most pure manner by means of an electro-galvanic battery; but it was expensive and therefore impracticable. Sponge gold in a pure state was essentially the same as gold foil, and subject to the same conditions. Though it would not change when tested by strong acids, yet in some mouths it would turn black, showing

that the fluids of the mouth was a powerful solvent. Gold foil, if rightly and skilfully used, would stand all the tests required.

Dr. McKELLOPS, of St. Louis, had been very unfortunate at first in the use of crystal gold, whether from imperfect manipulation or because the article obtained was imperfect, he could not say. He found that the plugs would change after a lapse of time. The article first used, however, was condemned by Mr. Nichols, of the firm of A. J. Watts & Co., who furnished him with a better article, which so far as he had used it, he found excellent. For large, saucer-shaped cavities with a small margin to hold in the fillings, he had found it very advantageous. It should not be condemned after three or four trials. He had used some five or six ounces of the superior article, and he believed that by the next meeting of this Convention, they would all be satisfied with it. He was very much pleased however, with Dr. Arthur's method, and was going to Philadelphia to learn it.

Dr. GUNNING, of New York, said that according to the general experience of gentlemen who had used crystal gold, it required a great amount of pressure to make it solid. The density of the filling was a matter of great importance, and it seemed that more labor and time was required upon crystal gold than upon foil. That being the case, though a strong patient of forty years of age might well bear the great amount of pressure requisite with impunity, it would be frightful, perhaps, to a young delicate female. Time, to a person suffering pain, is a matter of some consideration. There were certain fillings which on account of their not being subject to wear, did not require so great density as others; would it be proper in such cases, under an excited condition of the nervous sensibility, to put in a larger quantity of crystal gold, subjecting the patient to great suffering, and running the risk in some cases, perhaps, of ruining the tooth in the socket, when foil could be inserted in less time and with less pressure and pain. The object of the dentist should be, not to see how dense a filling he could make in all cases, but to make a filling which would in all probability outlast the tooth in the socket. He contended that theoretical nicety was not their aim, but to make fillings

best adapted to the particular cases. He would not concede that crystal gold was the best article in cases which would not admit of great pressure; and in gold foil, he insisted, that they had an article which they could control, and with it they could, in most cases, fill cavities in such a manner as to perfectly exclude moisture and save the teeth. The foil manufactured was not all equally adhesive, but they could use the more adhesive foil for cavities where the greatest care and nicety was required.

Dr. G. not having completed his remarks, it was moved that the speaker be allowed ten minutes longer.

Dr. BALLARD moved as an amendment, that the discussion continue for the remainder of the morning session.

Dr. CLARK, of Louisiana, opposed the motion, as he wished some time to be devoted to the exhibition of improvements in instruments.

Dr. TAFT moved an amendment to the amendment, by continuing the discussion till one o'clock.

Dr. SEARLE said there were complaints that the old hackneyed subjects were kept before the Convention, and day after to-morrow would be Sunday.

Dr. RICH moved the previous question, which was carried.

The question being put on the amendments severally, and on the original motion, they were all rejected.

Eight minutes being left of the time allotted to this discussion,

Dr. FLAGG, of Philadelphia, obtained the floor, and remarked that, as regards the materials for filling, they knew infinitely more of foil than any other preparation. Work done by such men as Hudson, and many other deceased brethren of the profession, had stood forty, fifty, and sixty years, and fillings made twenty-five years ago, could not be told from work done twenty-four hours ago.

As to the method of using foil, it should be so used as to be the most thoroughly condensed, with the least amount of labor. He had been pleased with the remarks of Dr. Arthur.

Dr. TAFT moved that this subject be resumed at four o'clock this afternoon. Lost.

THE FEES QUESTION.

Dr. TAYLOR from the Special Committee, to whom was referred the paper of Dr. Townsend on "Professional Fees," reported that they regarded the subject as one of great importance to the profession, and the views therein expressed, as embodying principles which alone can lead to professional excellence; and while we would thus commend the whole, we would especially draw the attention of this Convention to that part which treats upon professional counsel and advice. The committee would not pretend to even suggest the amount of compensation which should be charged for any given operation, yet we cannot but recommend that this Convention do express their decided disapprobation to all that course of conduct, which so cheapens dental operations, that the good of the patient must be the sacrifice. We entirely disapprove the idea that an intelligent people will not appreciate and pay for the most perfect operations. We offer, therefore, the following resolutions:—

Resolved, That it is the duty of every member of the profession to so charge for his services, that he shall be well paid for all the time and the best skill he can expend on an operation, and which shall be an inducement for further excellence.

Resolved, That the best interests of dental science demand that a fair and liberal fee shall be charged for professional counsel and advice.

Resolved, That our profession, having for its basis true knowledge and skill, we cannot but regard that knowledge which may prevent disease as of equal, yea, more value to our patients than that which may arrest or cure.

The report was adopted unanimously.

Dr. RICH moved that a committee of three be appointed to revise and prepare the report of the proceedings for publication, and to have the revised report and Dr. Townsend's paper published entire, in all the dental journals. Adopted. The Chair appointed Drs. Rich, Maguire, and Dwinelle as such committee.

Dr. VAN PATTEN, of Washington, D. C., moved that at five o'clock this evening, the Convention proceed to consider the time and place of the next meeting. Carried.

A notice was then read, inviting the dentists from abroad, to

an entertainment, to be given by the dentists of New York and Brooklyn, at Dodworth's Rooms, this evening. The members to meet at Hope Chapel, at eight o'clock, P. M.

Dr. CLARK, of Louisiana, moved that one hour be now devoted to the exhibition of Dental Improvements.

Dr. W. B. ROBERTS, of New York, exhibited a set of teeth made with continuous gum mounted on platinum.

Dr. LOOMIS, of Cambridge, Mass., presented a specimen of artificial teeth for which he claimed superiority, dispensing with a metallic plate, and substituting a mineral base, the whole forming a solid piece.

Dr. WHEAT, of New Haven, produced a specimen of teeth inserted in hard rubber compound. The hard rubber was perfectly free from any liability to absorption, and it was impossible to break the teeth so inserted, especially the grinders.

Dr. MALLETT, of New Haven, presented another specimen, made in a similar way, which he and his partner had, he believed, perfected. There was nothing but mineral teeth and hard rubber used—no metal. He proceeded to describe the method of preparation.

From all that could be gathered by the reporter, it is believed that there is a patent which bars the free use of each of the above improvements; in the two latter cases, however, it is only the use of Goodyear's Vulcanizing Patent that stands in the way.

Dr. FRANKLIN, of Newark, exhibited a fluid lamp adjusted on a balance, with an inverted syphon, running from the cup to the wick. It was so adjusted, that as the fluid became exhausted, the part containing the wick gradually lowered, causing a uniform flow of alcohol. It had also the advantage from the arrangement of the syphon, of being perfectly safe from explosion. When the lamp is not in use, and the cap is put on the wick, then, the wick part being the heaviest, it was kept in a horizontal position by a spring underneath.

Dr. MALETTE exhibited a plate punch so arranged that two holes could be punched at once, corresponding with the pins for the backs in artificial teeth, one punch being moveable. It was used for punching two holes in the plates, suited to the pins in the artificial teeth.

Dr. HARRIS, of Baltimore, exhibited an instrument invented by Dr. Putnam, for producing local anesthesia, very useful for extracting teeth without pain.

Dr. PUTNAM stated that the agent used was ice and salt, and the instrument was so contrived, that the application could be made to the smallest portion of any external part of the body. The gums were frozen by the application, and consequently the teeth were extracted without pain. Some gentlemen raised an objection to this application, on account of its causing sloughing sores in the gums.

[The reporter here feels it his duty to state, that the report which appeared in the *Express*, concerning this invention, in which it is stated that the Convention adjourned to Dr. Putnam's house to witness the operation, is incorrect, and the fact of the report appears under the head of "Afternoon Session," when the explanation was made in the morning, leads to a suspicion that the reporter had some other purpose in view, than to give a true and fair account of the matter, and the subsequent use made of that report confirms the suspicion.]

Dr. TAFT, of Ohio, exhibited a blow-pipe for throwing a warm jet of air into cavities for the purpose of drying them. It consisted in an india-rubber bag, with a metal tube attached, which might be filled with a heated substance that would retain heat well, the air passing through it by pressing on the bag.

There was also exhibited an instrument to enable dentists to get a more perfect articulation of teeth.

The Convention took a recess till 4 o'clock.

AFTERNOON SESSION.

A motion was made and carried, that the Convention resume the consideration of the subject of the best preparation of gold for filling teeth.

Dr. McQUILLEN said that his experience had not been a successful one in the use of sponge gold. But gentlemen would say that his experience had been so limited, that he could not arrive at correct conclusions in regard to this matter. He had not arrived at the conclusions he had stated, so much from his own experience, as from the failures of eminent operators. Therefore

he stood forward as a witness in favor of the objections urged against sponge gold, that its use produced discoloration and disintegration of the teeth.

He had tried the plan of annealing, explained by Dr. Arthur, and found that he could not introduce as much gold into a given cavity, as with the ordinary gold foil that he received from Abby. He believed the annealed gold hardened under the instrument so rapidly as to choke up. There was a point where they must cease to use the instrument when operating with ordinary gold foil, as there was a point where the painter must lay aside his pencil; otherwise they might get such a temper in the gold that the next gold put in would not adhere. He had reason to infer from his experience in the use of annealed gold, that the specific gravity of a filling, was not equal to that of one made with the ordinary foil, judging from the quantity used in the cavity.

Dr. BALLARD said that he could speak with some confidence upon this subject, gained by an experience of some years. He had used crystalline gold for three years with great success. He had the pleasure of seeing the first operation that was ever performed with crystalline gold, and it was perfectly successful. The result of his experience could be summed up in a very few words. There was no question that a vast amount of improperly prepared gold had been in the market, imperfectly purified and imperfect in its microscopic structure. He wished only to speak of perfectly made gold, which contained all the requisites that were desirable for a successful operation. Many failures, undoubtedly, had occurred with the very best gold, but his own experience taught him that these failures had been the result of imperfect manipulation. He did not know a man anywhere who did not make a failure sometimes. In a majority of cases occurring in his practice of three years, he had used crystalline gold with success, but there were cases in which it would not answer. He wished to state the following reasons in favor of its use—its exceedingly delicate structure, which enabled the dentist to place it in positions so exposed, that nothing else could be retained there, its perfect purity, and its density.

In regard to porosity of fillings, it was perfectly evident that

a perfectly solid filling could not become porous without expanding and disrupting the plug, or splitting the tooth. A porous filling, therefore, must have been left so in the beginning ; gold once deprived of its porosity, could not become porous again. The experiment related yesterday, by Dr. Dwinelle, ought to convince any one that a filling of crystal gold could be made perfectly solid.

Dr. TAFT considered the method adopted by Dr. Arthur, as a very great advance in the use of gold, and he intended to try it. Leaving that out of view, he preferred in most cases crystal gold to gold foil. There was a confusion of terms in speaking of sponge gold, many applying it to all the preparations that had been made and called by that name, perceiving no difference between the varieties that had been produced. There were three forms in use for filling. Sponge gold he considered to be simply granulated gold obtained from precipitation ; by various methods of precipitation they could get an article with which they could fill deep cavities. Then there was structural or fibrous gold. Then again there was another form in which its crystals were larger and more definitely formed, than in the two previously mentioned. In that variety which had no structural character, but was simply gold in a state of minute division, they had to depend entirely upon its property of cohesion in introducing it into a cavity. This form of sponge gold was not reliable, although occasionally tolerable fillings might be made with it. In the structural or fibrous gold—which might be denominated crystalline—besides the adhesiveness, it was retained in the cavity by the fibers folding upon one another. Again in gold formed of definite crystals, they not only had the cohesion property, but the interlacing of the angles of the crystals to retain the filling in a solid state. In the use of foil well annealed, there was a cohesion doubtless sufficient to retain the particles together ; but in the crystalline gold there was besides cohesion, this interlacing of the particles which they did not have in foil. No doubt with sufficiently strong walls they could build up foil into a pyramid as described by Dr. Townsend, but he thought it required much more skill with foil than with crystal gold ; and he conceived that there were many cases where crystalline gold

could be used where foil could not, as in the case described by Dr. Clark, where one-third of the approximate edges of the incisors are broken away.

The PRESIDENT (Dr. Harris,) said that the preservation of the natural teeth was of more importance than the replacing of those organs by artificial substitutes. He rose not so much to give his own experience in the use of crystalline gold, as the results he had seen from its use by other operators. He had been in the habit of using crystal gold for three or four years. During the first two years of his practice in using it, the results were not so satisfactory as he could have wished, but more recently they had proved so, although he was not yet prepared to lay aside the use of foil. He used three ounces of foil to one of crystalline gold. When he had heard doubts expressed by several members of this Convention, with regard to the practicability of making fillings with crystalline gold of as much value and permanency as those made with foil, he felt it due to the manufacturers of crystalline gold to say, that he had seen fillings of this material that had been used in the mouth upward of two years, which were in a most perfect state of preservation, equal, and in some cases, when all the circumstances connected with the cases were considered, superior to any fillings with foil.

A case occurred to him at this moment, of a young lady who formerly resided in this city, who recently came into his office to have her teeth examined. Many of her teeth were made up almost apparently of gold, several crowns having been destroyed. One of these crowns, in particular, had been built up with crystalline gold, and although it had been there two years, it was as perfect as any filling could possibly be. There were thirty fillings or more in all, made by Dr. Ballard, of crystalline gold, two years ago. An upper molar that had been decayed away, so that if he was not mistaken, the walls were entirely gone with the exception of a small portion which came down below the margin of the gum, was built up and answered all the purposes of a natural tooth. He could name other operators, Dr. Dwinelle particularly, who had realized his fullest expectations with regard to this article. He was fully satisfied that there were cases in which this form of gold could be used more advantageously

than foil; but on the other hand, he might say the the same in favor of foil. It would be difficult for him to say which he regarded as the most valuable, though if he could have but one he would hold on to the foil, having used it so long that he had become in that respect, something of an "old foggy."

Dr. RICH said, the difficulty of procuring foil that was sufficiently adhesive, even after he had annealed it, had induced him to try the merits of crystal gold. The experiments he had made with it, had demonstrated beyond a doubt, that its particles would adhere, it could be made solid, and when solid it was impermeable.

Among the experiments made to ascertain these facts, were the following: Portions of this gold were packed in the cavities of teeth with ordinary instruments that he used every day in his practice. One of the filling so formed was drawn out into wire, another was rolled into plate, and a third was hammered into plate on the anvil. Another portion that formed a small disc about an eighth of an inch thick, was secured on the end of the tube of an air pump; a drop of water was then placed upon the upper surface of the disc, and the tube exhausted with the full force of the pump, (which was a powerful one,) the water remained upon the surface. The disc was then ground down to about one half its original thickness, and the experiment repeated with the same result. The objection to this gold that it requires more time to consolidate it than is necessary for foil, will not be sustained when it becomes better known. When he first used it, a filling of crystal gold required double the time that he would have spent on one of foil. Now he packed and finished it with as great facility as he did foil, and found it more easy to prepare, of convenient sizes, for introducing into the cavity. In difficult cases, as, for instance, where the filling has to be built up independent of the support of the walls of the cavity, crystal gold can be used with much greater facility than foil. This, is a very important advantage. The improved crystal gold, as manufactured now, by A. J. Watts & Co., did not of itself produce discoloration, it was *pure* gold without the least trace of any other substance, and therefore it could not discolor the teeth.

Several professional friends had told him, that they had cases in their practice, where they had used crystal gold, and it had produced discoloration ; as he (Dr. R.) doubted that the gold had been the cause of that effect, he had requested them, for their mutual satisfaction, to allow him to see the fillings removed, and to examine the cases critically. In several instances they had done so ; the fillings were removed, and the gold, and the cavities examined, and in every case it was clearly evident that the fault was not in the gold, but in the manipulation, either in preparing the cavity or in packing the gold, and in every case, it was easy to decide to which of these two causes the failure was to be attributed.

The statement is often made, that the surface part of a crystal gold filling, becomes quite solid and hard, while the rest of it remains soft and porous. When this occurs, it is the fault of the manipulation ; if one part of the filling could be made solid, the whole could. The amount of pressure that made the surface dense would have had the same effect upon any other part of the filling, if it had been applied there. The proper method was, to pack the filling solid from the bottom of the cavity, and introduce the gold in small portions, each of which must be made as solid as may be desired, before the portion which is to be packed on top of it is introduced. One of the most valuable properties of crystal gold is, that it can be made of any given degree of density of which gold is susceptible, with much less pressure, than would be necessary to produce the same degree of density in foil. In finishing the surface of the gold, when the cavity is filled, this peculiarity must be borne in mind, and in consolidating and finishing the gold at the margin, great care is necessary to avoid working it too much at that point, for if as much labor was spent upon it, as would be necessary to make the margin of a filling of foil as solid and as hard as it ought to be, the margin of the crystal gold filling would become brittle, and would easily break and crumble up. The same effect would be produced with foil ; when it reached the same degree of density, that would also become brittle.

PLACE OF NEXT MEETING.

The Convention then proceeded to appoint the place for the next meeting.

Washington, Boston, Niagara Falls, Saratoga, White Sulphur Springs, (Va.,) Baltimore, Cincinnati and St. Louis, having been severally proposed, the Convention decided, by a division of 56 to 40, that the next meeting shall be held in Boston.

On motion, it was agreed that when the Convention adjourn, they adjourn to meet at Boston, on the first Tuesday in August, 1857.

LOCAL SOCIETIES.

Dr. BLANDY, of Baltimore, offered the following resolution, which was adopted :—

Resolved, That this Convention recommend the formation of local or state societies, and that each association thus formed, be requested to send one or more delegates to each meeting of this Convention, thus making our annual convocation emphatically the great central Congress of the Dental profession.

CREDIT FOR NEW IMPROVEMENTS.

Dr. TAYLOR moved the following resolution, which was adopted :—

Resolved, That in the opinion of this body, the credit due for new discoveries or useful modes of operating, belongs more to those who have given those improvements to the profession, than to those who pretend to have discovered the same at a previous period.

The following resolution was offered by Dr. BUCKINGHAM and adopted :—

Resolved, That the Corresponding Secretary request the members of this Convention and others, who have anything new or useful, to present them at the next meeting.

SCALE OF PRICES.

Dr. SHAW, of Philadelphia, moved the following resolution :

Resolved, That a committee of be appointed to inquire into the expediency of adopting a scale of minimum prices, every practitioner to have the privilege to have a scale of prices of his

own, as much higher as he may consider proper, and that it shall be considered derogatory to the character of any dentist, to go below the scale that may be adopted by the Convention; said committee to report at the next meeting of the Convention.

The resolution was adopted, and the Chair appointed as the committee, Drs. A. R. Shaw, C. W. Ballard, and E. Townsend.

COMMITTEE ON PUBLICATION.

The following resolution, offered by Dr. BONSALL, was adopted :—

Resolved, That the committee on the publication of Dr. Townsend's address, be authorized to draw on the Treasurer for the expense of publishing the twelve hundred copies ordered by the Convention.

The following resolution, offered by Dr. RICH, was adopted :—

Resolved, That the publishing committee be authorized to draw on the treasurer for the expense of furnishing stereotype plates of the proceedings of the Convention, and Dr. Townsend's essay, to such of the Dental Journals, as shall publish them entire.

VOTES OF THANKS.

A unanimous vote of thanks was then passed, on motion of Dr. AUSTIN, to the Dentists of New York, Brooklyn and Williamsburg, for the courtesies received by the members from abroad, and also, on motion of Dr. WATT, to Messrs. Jones, White & McCurdy, for their excellent entertainment on Thursday evening.

A vote of thanks was then, on motion of Dr. COATES, of Virginia, tendered to the worthy President of the Convention, for the dignity and impartial manner with which he had presided over the deliberations.

The Convention then on motion, adjourned *sine die*.

THE COLLATION AT DODWORTH'S.

On Friday evening, the Dentists from various portions of the United States, who have been in attendance at the Dental Convention, were invited to attend a collation given by the profession of New York and Brooklyn, at Dodworth's Hall, near Grace Church. The tables were laid out in the usual manner

of such entertainments. They were tastefully covered with fruits, ornamental dishes, etc.

The following were the Committee of Arrangements :—Drs. J. H. Foster, E. J. Dunning, J. G. Ambler, J. Allen, C. M. Ballard, N. W. Kingsley, C. C. Allen, W. H. Dwinelle, F. H. Clark, B. F. Lord, W. T. Larouche and B. C. Leffler.

Some two hundred and fifty of the Dental profession took their seats about nine o'clock, and commenced a systematic attack upon the good things before them.

Dodworth's band enlivened the entertainment by the performance of exquisite music.

Previous to the commencement of the repast, Dr. FOSTER, Chairman of the Committee of Arrangements, addressed the guests as follows :—

Mr. President and gentlemen of the American Dental Convention—

A portion of the Dental profession of this and the adjacent city of Brooklyn, have invited you to this entertainment to-night, and have assigned to me the pleasant office of expressing to you in their behalf, the satisfaction they feel in the opportunity thus afforded them, by your meeting in this city. In their name, and in their behalf, I bid you a cordial welcome.

I behold around me representatives of our profession from many different, and some distant States of the Union.

Our country has expanded to such a degree, that we cannot expect every State to be represented in a local Convention like this. But from the Green Mountains of Vermont, and the Granite Hills of New Hampshire in the North, to the everglades of the warm and sunny South—from the far and distant West, "where the star of Empire takes its way," and the wilderness has been made to blossom as the rose, to this rude and rock-bound Atlantic coast—throughout the whole length and breadth of this vast extent of territory—wherever art and science have extended their onward march—there may be found those who have chosen this profession as the occupation of their lives.

You have here, gentlemen, not in point of number only, but in intellectual and scientific attainment, a most honorable and respectable representation of the profession; and I most sin-

eerely wish that many others whom we all know and delight to honor for their professional worth and usefulness, were here also to-night, that we might extend to them also, the sincere and hearty welcome with which we greet you. (Applause.)

At the principal table were seated on each side of Dr. Foster, Dr. Harris, of Baltimore, the President of the Convention ; Dr. Rich, of New York, the ex-President ; Professors Townsend, Arthur, Buckingham and Flagg, of Philadelphia ; Professors Taylor, Taft and Watt, of Cincinnati ; Professor Austin, of Baltimore ; Dr. Neall, of Philadelphia ; Dr. Clark, of New Orleans, and among the invited guests, we noticed Mr. Ashael Jones, S. S. White, and J. D. McCurdy, of the firm of Jones, White & McCurdy.

After the edibles had been abundantly discussed, Dr. FOSTER again addressed the company, congratulating them upon having just closed one of the most happy Conventions that it had ever been his pleasure to have known. He regretted that indisposition had prevented him, in a great measure, from being present at the deliberations which had been attended with so great unanimity of feeling, and hoped the future meetings would be attended with like results. They had learned how much had been done to advance the interests of the Dental profession, and how much remained to be discovered. Their lives were fleeting but their art was not ;

“ And though our hearts are strong and brave,
Still like muffled drums they're beating
Funeral marches to the grave.”

Dr. NEALL responded to the remarks of Dr. Foster. He said he rose because he was called on, and always liked to answer when he was called. He would have much preferred however, that their great Goliath of Gath had *Harrassed* them, (laughter) a man whom, if he had not performed his part so well, he should have considered of entirely too large make for a dentist—and he told him long ago, that a smaller man could work much better around the chair, than one so large as he.

As to that funeral march just alluded to, all he had to say was, that he presumed he expressed the sentiment of all present, when

he hoped it would be a very slow one. To the other sentiments expressed by the Chairman, he heartily responded, and in behalf of the members present he would say, that the welcome tendered had been accepted—they had made themselves at home already. (Applause.)

The Chairman at the opening had said, that the star of empire westward took its way. There were here present, brethren from west of the Alleghanies, who had shown an evident determination on their part, that that star should never set, until the last ray of science was exhausted. He was reminded of the words of a Western poet,—

“ By mountain height, in lowly vale,
By mighty lake and gentle river ;
Wherever sweeps the chainless gale,
Onward still they speed forever.”

Such, he trusted, would be the march of the dental science. (Applause.) But while their march was onward, he hoped it would be borne in mind that the great end of their science was to do good. He was pleased with the remark made this afternoon, in favor of holding the next convention at Boston, because they could do more good there. The highest and noblest ambition was to do good—to succour human woes. (Applause.)

THE REGULAR TOASTS.

The first regular toast was—

The President, the Constitution, and the General Government of the United States of America.

Musie—Hail Columbia.

The second regular toast was—

The American Dental Convention, organized upon the broad basis of equality and fraternity; may it prove a foundation for the erection of a superstructure, beautiful and harmonious in all its proportions, the materials of which shall ensure its perpetuity.

To this Professor HARRIS, of Baltimore, responded. He remarked, that he had witnessed in this gathering of Dentists, a scene he had never expected to behold, and after referring to the rapid progress of the dental profession, he compared den-

tistry thirty years ago, to a wilderness overgrown with wild forest trees; since then it had been nearly cleared, still *roots* remained to be extracted. He thought, however, from what he had seen this evening, they all understood the operation of "*filling*" well. (Laughter and applause.)

Third regular toast:

The originator of this Association, who, residing in the city of brotherly love, has infused and ineorporated that spirit into the whole body politic.

Dr. TOWNSEND, of Philadelphia, was called upon to reply, and was greeted with warm applause. He felt proud to see so large an assembly of intelligent, well educated gentlemen present, and to know that his individual efforts had contributed to bring this result about. One year ago, when he first spoke of the possibility of collecting the dentists of this country, and possibly of the world, into a Convention, upon a broad democratic platform, and thus emanating a bond of union, the thing was doubted by his best friends. It had been a pet scheme of his for years, and he could not relinquish in spite of those discouraging words; accordingly, in the spring of 1855, he took the liberty of calling his friends together, and laying the scheme before them. In this, he had followed the custom of the Quakers, among whom he was brought up, who when they have anything for a long time resting upon their minds, lay it before their brethren, and if their friends are ready to receive it well, if not they wait till they are ready to act with them. He found his friends willing to act, and now he felt that the bond of union was secured, and that the next Convention would be even larger than this. (Applause.) So long as they kept to the fundamental principles of truth, love, and charity, they would gain in numbers, and promote the great end of doing good. (Applause.)

Fourth regular toast—

The first President of the American Dental Convention.

Dr. RICH responded as follows:—Mr. President and Gentlemen. The success of the American Dental Convention has made it a great honor to have been its first president. The scheme, of a National Convention of Dentists, is no longer a doubtful experiment. It is a successful one. And the result is

the establishment upon a firm basis, of a useful and permanent institution, which, if we love our profession, we must all be proud of. Associated effort for the accomplishment of any purpose, is one of the great engines of civilization ; and the talent and general intelligence of the Dentists of this country, has rendered an association like this, an absolute necessity. When a number of ambitious and well educated men, situated in different localities, of a large country like this, are earnestly striving to elevate and advance the standard of their profession, they need some common ground, such as this society presents, where they can come together, and contribute the result of their individual labor, to the general fund of information. And the beneficial effects of associated effort, for the advancement of the cause of science, is nowhere more apparent than in the history of our profession. It was only when Dentists began to communicate freely with one another on professional subjects, and thereby elevate themselves, that our calling began to be recognized as a respectable one.

It is scarcely twenty-five years since the first efforts were made in this direction. The few liberal-minded men who started this movement, saw the necessity of united effort, and such of them as resided in this state, formed a local Dental Society, in the city of New York. A few years afterwards, the Baltimore College of Dental Surgery, and the American Journal of Dental Sciences, were established. And then in 1840, came the grand movement in the history of our profession. A few of the distinguished dentists of our country, I believe they did not exceed twenty-five in number, met in this city, and formed the American Society of Dental Surgeons. From that moment our profession has been steadily advancing, and now a call for a National Convention, is responded to by nearly two hundred members. The pioneer journal, whose first issue was barely one hundred and fifty copies, has reached an issue of over a thousand, and there are five or six other Dental Journals, with a circulation of from one to three thousand copies each. We have three or four Dental Colleges in successful operation, who swell our ranks every year with earnest, well-educated men. (Applause.) A number of local societies have been established, in different parts of the

country ; these organizations have stimulated and benefitted all who have been brought within their influence. Gentlemen, such is the condition of our profession in this country. We see what the Dentists themselves have done. Is the credit of the progress and elevation of this profession due to them alone? Why is it that the Dentists of other countries have not elevated themselves and their profession? And to what cause must we attribute the superior skill and intelligence of the American Dentists, when compared with those of other countries? The reason is obvious ; the patrons of the European Dentists are the privileged classes, the people of rank, the rich, and the few, a very small portion of the population. There, where a small number live in luxury and plenty, at the expense of the poverty and privation of the many, the down trodden masses have no means to pay for dental operations ; they cannot procure the necessities of life, much less pay for the services of a skilful dentist. The Dental profession is at a low standard. They have no elevating influences. No Dental periodical literature. Dental Colleges have not been attempted. Dental Societies they have never had, and consequently, they produce no men of superior talent ; and we see a comparatively young nation, supplying the Old World, with one of the means of refinement ; for America, actually, furnishes Europe with Dentists. (Applause.) How different a condition of things do we find here. The high position our profession occupies, is only one of the types of our beloved country. Its condition is one of the results of the working of the problem of self government by the masses, and we flourish, because we live among a highly prosperous, well educated, moral, and refined people, the masses of whom can appreciate our skill, and afford the means to patronise us. None but the refined, pay the necessary attention to the teeth, and in this respect, and that of personal cleanliness, the people of this country are elevated far above any people on the earth. (Great applause.) Gentlemen, how many things we have to be proud of as Dentists. In this soil, so genial to the growth of talent, our profession has advanced with giant strides. We have the only periodical literature of Dental science in the world. The only regularly organized colleges, for Dental education. The

only Dental Societies, and the only Dental Convention that has ever been held in the world. (Applause.) One of the great advantages of this Convention is, that it has brought a large number of the members of our profession face to face. We have seen the men of whom we have heard. As a general thing, men needed but to know one another, to like one another, and when brought together, to converse on topics of mutual interest and concern, they generally became good friends. And, one of the results of which we ought especially to be proud, is that, instances have occurred during this meeting, of gentlemen, who on account of some old rankling animosity or jealousy, have not spoken together, or recognized one another for years, having come together at this Convention—taken each other by the hand—and all their former ill feeling had been swept away. (Long and loud applause.) Another of the fruits of this Convention is, the New York Dental Association, which was organized on the eve of the meeting of this body. I sincerely hope there may be many such formations throughout the Union, before the next meeting of this Convention. (Applause.)

Allow me gentlemen, to express to you my warm acknowledgments, for the honor of this toast; and, to thank you again, for your kind support, during the time I had the honor to preside over your deliberations. (Applause.)

Fifth regular toast—

Dental Colleges.—Ever keeping pace with the spirit of the age. May their motto be “Excelsior.”

Professor ARTHUR, of Philadelphia, said he was rather surprised that he should be called upon to respond to this toast, being the youngest in the category of professors present, nevertheless, he had the honor of being the oldest graduate of any dental college. (Applause.) He well remembered the struggles of his respected friend, Professor Harris, at the outset of this enterprise, which had led to such important results already, and which would lead to more important hereafter. He regretted to say, that the opposition which was at first met, was not yet entirely broken down, though it was rapidly passing away. It must be evident to every intelligent dentist, that a regular systematic education was absolutely necessary for the advance-

ment of the science, and so far as he was acquainted with the gentlemen connected with the Dental Colleges, they were honestly seeking that advancement. (Applause.)

Dr. A. then explained the reason of the sudden passing out of existence of the institution, with which he had been connected, and its being succeeded by another. It resulted from an attempt to bestow honors by the board of trustees of the Philadelphia College, only one of whom was practically acquainted with the dental art, upon individuals not known to the profession at large, independent of the wishes of the faculty of that college. This practice had grown up in literary colleges, established by endowments from educated men, without whose consent, or the consent of teachers employed by them, no degrees could be conferred. As they were intelligent men, they were capable of judging of literary qualifications, and therefore, it was proper enough that they should confer degrees. But it was easy to see that such a rule, when applied to a college erected for the purpose of professional instruction, must be destructive of its interests, and injurious to the profession upon which it was attempted to be practiced. The trustees of such an institution were, of course, totally unqualified to confer honors. Therefore, the gentlemen of the profession connected with that college, sacrificed its charter, and, though at first doubtful of success, they succeeded in obtaining a new one, containing a clause expressly prohibiting the conferring of honorary degrees, except by the consent of the faculty. That faculty intended to do their duty regardless of any other consideration, and if that was done, the course of the dental profession must be onward. (Applause.)

Sixth regular toast—

The Dentists of the South and Southwest.—A noble army of co-laborers. May they swell the tide of our progress with a ceaseless flow, like that of their own mighty Mississippi.

Dr. J. S. CLARK, of New Orleans, responded.

He said that large rivers, large growth of tropical verdure, and genial skies, might not produce large men to "*swell the tide*" of human progress; but they engendered large aspirations. (Laughter and applause.) True to these impulses, they might attempt large things, but they felt that as in nature they pos-

sessed an artery of a Continent, so, professionally, they felt the throbbings of arterial blood, whose every pulsation was in unison with the great heart.

He would illustrate. A friend of his, being fond of oysters, called Tike his servant, and told him to polish his chafing dish and to make it shine like the sun. Tike took the tin and worked at it a long time, but he could not produce anything like the lustre of the sun. Tike hated to give it up, but finally came back to his master and said: "*Massa, I make im shine like de moon, but he no shine like the sun. Massa, I think he can't be did.*" (Laughter.) So in the dim twilight of our novitiate, high impulses may lead us to think ourselves creative geniuses; that we are called upon to even out-artist nature herself. But if we are true servants of our great master, when we find our mistake, we shall do as Tike did, keep on with our work, for Tike's work was not done. His master called him late one night, and told him to brush his boots, and to make them shine so that he could see his face in them. Tike took the boots, and by the dim light of an old candle commenced his task, but the more he brushed, the more he couldn't see his face in them. Faithfully he worked, till finally he began to see the reflection of an eye, then his mouth, and he exclaimed, "*I see um eye! I see de mouf! de face come bym-by!*" (Laughter.) But Tike did not know that a light had broken in from the east, and that the sun had risen on his toil-spent night.

We, gentlemen, have watched the sun in his rising. We saw at first the grey dawn, then a ray of light came down from Baltimore and the cities of the North, till a broadcast sunlight made us feel that ours, indeed, was the "Sunny South." (Applause.) But some of us love to come home. Some of us come on a yearly pilgrimage to the old hearthstone. We listen to the gentle foot-fall that rolls back on memory the tide of years, and we stand once more in boyhood's "home, sweet home." With this feeling fresh in our hearts, may we not visit this, our annual re-union, as the place where our friends and brethren dwell. (Applause.)

Seventh regular toast—

Our brothers of the great Northwest.—Full of vital energy, may they be true to their motto: "The Young Americas of our profession."

Dr. ALLPORT, of Chicago, in response said, that there was a familiar song whose chorus was, "There's a good time coming." That good time in the dental profession had come. (Applause.) It did him good to see the veterans of the profession here mingled with those who, like himself, were young, but were willing to shoulder the responsibility of elevating it to that dignity that its devotees expected it to attain. (Applause.) A good time had come, but a better time was coming, when dentistry would take its rank with the most respectable professions. What was there that was more needed than intelligent dental practitioners. The time was coming when every place that supported a physician, or a lawyer, would also support a well educated dentist. Their numbers here to-night were respectable, but nothing like what they would be (applause), and while they increased in numbers they should equally increase in scientific knowledge and skill. He assured them that the members from the west would return with the determination that the west should be the Young America of the profession. (Applause.)

Eighth regular toast—

Our brethren of the New England States.—"Stars in the East," their cheering, effulgent rays, gladden us here to-night.

Ninth regular toast—

Dental Progress.—May its march be onward and upward, until its genial rays shall be reflected throughout the world.

Dr. ALLEN, of New York, said that he recollected being present on one occasion, when Davy Crockett being called on to address an assembly, came forward, and, after standing a moment or two in a very awkward position, said: "My good friends and fellow-citizens:—There is not a man on earth that would love to talk to you better than I, if I only knew how." (Laughter and applause.) I feel like endorsing that sentiment this evening.

Dr. A. then spoke of the history of the progress of the dental art, remarking that more progress had been made in the last half century, than in the previous thousand years, and American genius had done more in that time, than the genius of all the rest of the world. He also made some further remarks upon the mechanical department of dentistry, to which he was more part-

cularly devoted, urging the necessity of a thorough knowledge of the anatomical structure of the muscles of the face, in order to insure complete success in restoring the natural expression of the countenance.

Tenth regular toast—

The Ladies.—Often present at our labors, never absent from our thoughts.

Dr. AUSTIN was called out to respond to this toast, and made some very amusing remarks which he termed an apology for not responding, and which he modestly requested the reporter not to give. His remarks created considerable merriment.

Dr. GUNNING, of New York, being called for, rose and remarked that he could appreciate the feelings of his friend from Baltimore, living as he did in a city renowned for the beauty of its ladies.

Eleventh regular toast—

The Press.—Ever ready to aid in every good word and work, we invoke their especial help in this our new fraternal enterprise.

Mr. BURR, of New York, being called upon to respond, said that he considered it a work of supererogation to speak for the press, for every body knew that the press spoke for itself. Nor could any one, strictly speaking, be said to represent the press, because the press represented itself, however much it might misrepresent others. Speaking for himself, individually, he would say that he had a very high appreciation of the dental art, and any gentleman, possessed of the general intelligence requisite for his station as a member of the press, who failed to appreciate that art, was unfit for his position. But though, paradoxical as it might appear, he was in a certain sense a speech-maker, yet being no speaker, he would resume his seat. (App'lse.)

The regular toasts being completed, the Chairman read a letter from Mr. Jones, accompanying a box of honey for the table, and remarked that having had the honey, he hoped they would in addition now have some honied words from Mr. Jones. Mr. Jones begged to be excused, but would call upon his partner to answer for him.

Mr. J. D. McCURDY, in answer to this call, related an anecdote

dote of the man that Dr. Franklin observed at a public table. While every one was busy helping himself, this man, unlike the rest of them, said nothing, whereupon the Dr. was disposed to attribute to him some very good sense, and he watched him with a good deal of care, with the expectation that when he did open his mouth, he would hear something very brilliant. By and by the dumplings came on, and the man was desirous of having some sauce upon his dumpling. The Dr. eyed him pretty closely to see if he was going to speak, when at length he exclaimed to his neighbor : " Will you hand me some of that stuff you wallop your dumplings in ? " (Laughter.) So possibly he (Dr. McC.) might have got the credit of being capable of making a speech if he had not been exposed. He, however, had sufficient notice at the beginning of the entertainment that it was expected of him, from the fact that the committee had brought him forward to a particular place, with a number of other lambs, and older sheep for slaughter. (Laughter.) When he was seated in his place he felt himself in the condition of the fellow who had been arrested for misdemeanor, whose counsel made him out quite innocent and reputable, so much so that he exclaimed that he never knew he was so good a fellow before. (Laughter.)

Dr. McC. then spoke of his fears at first for the success of this enterprise, on account of the many jealousies that existed among the members of the profession, but he confessed himself surprised and gratified at the result, and wished them continued success. (Applause.)

The following toast having been handed to the Chairman was then read :

The first president of the New York State Society of Dental Surgeons, to which

Dr. COVELL responded. He said that he had frequently heard warm expressions of the great and lasting advantages derived from that institution, showing that though dead it yet speaks. (Applause.) It did not die for want of vitality in its members, but only of its organization.

After some further remarks, in which he alluded to the press as the mighty engine by which the dental science was achieving its progress, the gentleman sat down.

This allusion to the press called the remark from Dr. Harris, that no profession used the *press* more than the dental.

Mr. BIGELOW, of the *N. Y. Express*, hoped to be excused in this connection, for giving the following sentiment :

Mr. Chairman and members of the dental profession :—When your profession next hold a meeting like this in our city, may all our distant and neighboring *Towns-ends* still larger delegations to your Convention, where may the dental science be *Foster-ed* until all its *Rich* treasures shall be discovered, and fill both patient's teeth and practitioners' pockets. (Applause.)

Dr. DWINELLE, of New York, being called out said, that the star of hope was in the ascendent, the good time had come. How many unsuccessful efforts in the last twenty years had been made to fraternize the members of this profession, but for the last two years their efforts had run parallel with their wishes. The secret of their success was the democratic principle upon which they were organized ; hitherto the efforts were made in a wrong direction, but now they harmonized with the spirit of their institutions. He hoped the designs of the excellent founder of this institution would be carried out to the letter, and that all unnecessary machinery would be avoided ; and next year he hoped to see, not only American, but European dentists represented in this Convention. (Applause.) The name of a dentist, once a reproach, now respectable, would yet become a title of honor. Then the names of Hudson and Gardette (peace to their memory !) would shine forth in greater brilliancy ; while he hoped the names of Harris, Townsend, Arthur, Dunning, and others, would by no means be forgotten. (Applause.) If every man would be true to the estimate that he put upon himself, the world would sooner or later endorse it. There was much to encourage them surrounded by circumstances like the present.

“ Let us then be up and doing,
With a heart for any fate—
Still achieving, still pursuing,
Learn to labor and to wait.”

(Applause.)

Dr. GUNNING rose to give a sentiment, “ May we never forget the Dental writers of Europe.” He regretted the lack of elo-

quence to do justice to the subject, but he did not wish to see anything that would look like forgetfulness of those noble writers—Bell, Hunter, Fox, Toombes—therefore he deemed it his duty to draw attention to those names.

Dr. HARRIS was glad of the mention of those names, and would give as an additional sentiment, the memory of a noble pioneer who fell a martyr to dental science—The memory of Alexander Naysmith.

Dr. DUNNING, of New York, at the invitation of the Chairman, remarked that it gave him heartfelt pleasure to be present. Thus far he had been a man of action and of labor, and had never learned to make speeches. He alluded to his first connection with a Dental association, when they met in a small room. He was then full of enthusiasm, and hoped he had not entirely lost it now. He attributed the rapid growth and success of the profession, to the fact that it was not trammelled, as other professions were, by laws and edicts that had their origin in by-gone times. Each man was putting forth all his individual efforts to do his duty and contribute to the advancement of the cause. It was the motive, aim and aspiration with which the Dental practitioner performed his duty, that had given to this profession its present character. (Applause.)

Dr. TOWNSEND gave as a toast—The New York Dentists, whose generosity is only equalled by their devotion to science—May they ever remain the brightest jewels in the coronet of their States greatness.

Dr. BALLARD being called out said, that nothing but kindness of heart could have induced them to call upon him to respond, and nothing but that, stood between him and the well laid charge of presumption. Young America had been spoken of this evening, and so far as the younger members of the Dental profession were concerned, he claimed to be an humble representative. If he had any reputation in his profession, it was due to the fact that he entered in at the straight gate, and there (pointing to Dr. Harris,) sat the gentleman who made the path smooth. (Applause.) When it was proposed at Philadelphia, to hold the next Convention at New York, it was urged as a reason that there was no local society there, no union among the Dentists,

and that therefore good might grow out of it. Good had grown out of it, for there was now union among them, and a New York Dental Association. (Applause.)

Dr. DWINELLE gave as a toast—

Our excellent representatives abroad. "Though lost to sight to memory dear."

The CHAIRMAN apologized for omitting, in consequence of the great number of the regular toasts, to call out their worthy friend, Dr. Taylor, of Cincinnati; he hoped to hear a few parting words from that gentleman.

Dr. TAYLOR said he had hoped to be allowed to sit in silence this evening. Unfortunately he had to make an apology instead of a speech for the close, as he had made no sort of preparation, and even if he had, it would have done no good. He began to think that the eastern people were "some," and next year he intended to go down to Boston and see what the real genuine Yankees were. (Laughter.) The dental science was once spoken of as auxiliary to the medical profession; that was now reversed, and the medical profession was auxiliary to that of the dental surgeon, and having got the upper hand, he hoped they would keep it. (Applause.) He returned his sincere thanks to the Dentists of New York for this hospitable entertainment, and hoped the gentlemen of the west would have an opportunity before many years to show their hands. (Applause.)

The festivities here closed, and the members dispersed.

ESSAY UPON PROFESSIONAL FEES

BY ELISHA TOWNSEND, D. D. S., M. D.

READ BEFORE THE AMERICAN DENTAL CONVENTION AT THEIR SECOND ANNUAL MEETING IN AUGUST, 1856.

Four years ago I had the honor, by appointment of the American Society of Dental Surgeons, to read before it a paper upon Professional Fees.

Constitutionally averse to those forms and bearings of controversy which have anything of moral assault and battery in them, I forebore to press the just complaint of the Profession against fees exceptionably low, for, though I could be sure enough for my own satisfaction, that the deserved animadversion would be free from all personal feeling on my own part, and just as free from any intended personal application to the individuals justly falling under the censure, I could not be sure that it would escape such application, and the unpleasantness of feeling that follows hard-hitting, however free from animosity. Feeling since, that the truths which govern conduct in this matter, ought to be driven clean through the subject and clinched on the other side, I propose now to add a few strokes of the hammer, let the point turn and grip where it may.

I give it no special direction, and if it pinches, or goes against the grain, or makes a split, I will only have to pay for the putty that will smooth it over again.

I could be well contented to leave the wrong to exhaust itself, while only inferior men, knowing no better, and capable of nothing better, work at handieraft-wages for such work as they sufficiently reward; because, I suppose, the wood-sawyer does not seriously injure or dishonor the cabinet maker. The tools which they respectively use and the sawdust which they make, sufficiently distinguish them for the security of the superior artizan's interest and reputation, and there is no danger of the shop being confounded in public apprehension with the curb-

stone ; but, when the mechanic, free of his guild, compromises with the cross-cut and the wood-horse, and *cords* up his jobs with a roughness proportioned to his speed, and lowers his prices a little and increases his business a great deal, to the injury and discredit of his art—then I think his brother chips have a matter of just complaint against him. The grounds of this complaint are these, and the like : Workmen with a good deal of skill, can botch jobs, in all points capable of concealment from their customers, to an extent that greatly diminishes the cost of production, and as greatly under-bids first-rate articles of the same kind in the market ; and the reputation of the jobber, if he holds a good professional position, adds a false warranty to the quality, and so drives fair and honorable competition out of the field.

A man's real superiority in his art is his lawful advantage ; he ought to have it ; and the world should have the benefit of it, and his competitors are benefitted by all their efforts to work up to him. Nothing but good grows out of such excellence to any body whom it affects. It is all fair trade, but, the tricks of trade are another matter, and stand to a different account, which his fellow craftsmen are concerned to settle against the man who employs them on the ground that their just rights are violated by such unfairness.

Sleight of hand, in its honest English sense, is lawful, but Frenched into legerdemain it is contraband, by all the rules of public policy and private rights. The inspection laws of the State and the city are grounded on the principle of the public protection and the defence of the fair dealer against fraudulent competition, and the moral sentiment which condemns false measures and false weights, justly bears still heavier against false appearances which are more dangerous and mischievous by all the difference of difficulty in their detection. Besides the injury to private rights, there is a great wrong inflicted upon the craft by all successes of unfair dexterity, which all parties are deeply concerned to prevent.

If excellence in an art, and progress in its improvement are rendered unprofitable, and their conditions impossible by workmanship that tends to deterioration in the quality of the pro-

duct, and the undiscerning and incapable public are seduced into its encouragement, the craft is demoralized, and all genius and skill that are honest are driven out of it, as all honorable eminence is prevented in it.

This is bad even for the ancient and honorable company of wood-sawyers, so far as tricks are possible in their trade ; but, when it creeps up into the range of art where veneering and imitation oaks, walnut, and cherries are practicable, all dexterity at deception and underselling in the market puts the business more and more within the province of the craftsmen's concern.

Out of the relative rights and duties which the industrial arts create among their members, the necessity for friendly, fraternal, and business associations arises.

In Continental Europe, *Devoirs* for all the trades, associate the workmen into companies, whose constitutions rule the whole business conduct of the acknowledged membership ; and, under the rudely administered justice of the fraternities, the men who offend against the common interest and honor, get their heads broke by way of caution to the weak brethern who are in danger of being subdued or seduced by the misconduct of the unworthy.

Free-masonry probably had its origin in this policy of a handicraft, when its hammer, plummet, and trowel were the implements in actual service. Our own printers, carpenters, and other trade-unions, are of the same character, and have similar objects though differently effected in the infliction of penalties.

And it is worthy of notice that while all the conduct of the craftsmen which affects the brotherhood is put under the government of their unions, as it ought to be, the main and ruling idea of them all is, the regulation of prices, as the means of securing every other beneficial object in their aim. There is a sound philosophy in this idea, which I need not discuss farther than just to observe that under the rule of low wages, proficiency is levelled to the rank of unskilfulness, eminence is starved down to mediocrity, or driven out of employment, and the men who have in good faith learned an art, find that learning useless to them, and they must either go back again in all their conditions

to the society of the unlearned, or use their skill to abuse the public confidence, and destroy the best interests of an honorable calling.

Under-working and under-selling having these consequences may well be regarded as treason to trade, and mortal sins in the decalogue of business morals.

The law of master-dom long treated such associations as conspiracies and punished them as misdemeanors, with fine and imprisonment, but revolutions in the civil and social systems of society, have settled the justice of such associations, purely upon their necessity; and the legitimate sovereignty of the useful classes has dethroned the despotism of the aristocracies of wealth and civil power.

The workers who make the world's wealth have grown strong enough upon their small share of it, to obtain the government of the bread question, and knowing that all other rights and liberties must begin there, they say that whoever touches their prices to depress them, is their enemy; and if one of themselves is the offender he is a traitor, and must be treated as one, with no other respect of persons than an increase in the penalty in proportion to the mischief he is capable of doing. These associates in hard work and partners in a common interest have other ways of lynching a delinquent than by violence—they won't work with him, nor consent by any act of tolerance to help the mischief that he does them. They are right in the principle, and are only in danger of mistake in its application. This danger of theirs is owing chiefly to the fact that the administration of discipline is necessarily in the hands of the injured, outraged and impassioned party, and so may catch the character of selfish revenge, and carry the punishment to undue and unnecessary lengths.

This is not so in our profession—it is in the power of the men who are not at all affected in their private interests to apply the remedy. No man has so little personal concern in quackery as the well established and well educated physician; *his* zeal for the repression of the mischief grows out of his reverence for his profession and his solicitude for its advancement in usefulness and honor, and he can therefore be trusted to exert all his

legitimate force in the correction of the mischief. So well, and so faithfully, do the members of the professions long and well-established, exert this power in their hands, that all the men, in regular standing with them, are held up to the common standard of conduct, both in the etiquette of practice and the rate of charges on which the common character and general prosperity of the faculty depend. The want of such conformity prevailing in any learned and liberal art to any considerable degree, is a sign of its immaturity and disorderliness. It proves, not the absence of the sentiment among its members, but the lack of an effectively exerted opinion for the prevention of abuses.

The Dentists of this country have not yet been able to organise themselves sufficiently for that combination of action upon the practice which would compel a general observance of duty by all the practioners in tolerable standing with the community; but it is the time now, in my judgment, to take ground, and endeavor a reformation with the hope of a very early success.

The men who meet here in convention are sufficient to begin the work, so that it must be soon and satisfactorily accomplished. Let us make it the subject of reflection and discussion, and so set the forces at our command in motion. We have already with a success both earlier and greater than any of us would have ventured to promise five years ago, liberalized the societary influence of the fraternity, and now it is doubly imperative upon us to see that the improvement of our profession's conditions shall keep pace with its enlarged freedom of intercourse and association.

We have made a successful movement for the *freedom* of the fraternity, and we must next strike for its honor and well-being. This is fairly within the power of a well-digested opinion upon professional duty and a corresponding enforcement by all the means and influences which an established sentiment can command.

We are not calling for tests, pledges, or quack laws of our own contrivance, but for the authoritative expression of the better judgement of the fraternity concerning the duties of the practitioner to the profession, and the resulting determination to carry it into effect by all honorable means within

the power of each individual convinced of its propriety and obligation.

I think, and others whose names would greatly strengthen the opinion, think with me, that now is the time for action on the subject. Some of the reasons which support the opinion may be given, but without pretending to exhaust them or to cover the whole ground of the exigency.

The system of education in Dentistry which may be called classical, is rapidly rising in estimation; elementary treatises, periodical literature, and collegiate instruction are multiplying their force and efficiency at a rapid rate. The standard of requirement is rising in and out of the profession in due proportion to these powerful agencies, and a laudable ambition for excellence is growing to be the characteristic of the pupils and younger aspirants for professional success. To gratify and reward such aspirations where they exist, and to invite that sort of spirit, by providing for its indulgence and rewards is therefore a special duty of the time.

It is indeed the duty of all times, but it is the necessity of the present; and we must address ourselves to it.

Through all the public agencies of the educational function, there is but one tone and one tendency—the improvement of our art: the stimulus and the exhortation are as impulsive and impressive as they can be made, but what can promptings and precepts avail when they are resisted by agencies which have the power to compel the surrender of principle, or crush the prosperity of the generous young man who endeavors to maintain it?

If the men who have an established reputation degrade prices below such remuneration for good work as the young candidate for business success can live by, the struggle to which he is put may be something more than he can sustain—when he is told by every applicant that comes to him with a huckstering spirit, that Dr. somebody, that everybody knows and has more patients than he can attend to, charges but little more than half the prices which he asks; what shall he say to it? and what shall he do about it? He has the skill and science of the profession, but he has yet no fame which can command the business

of the more judicious and liberal class of patients, and he must succumb or submit: he must substitute speed for perfection of work, he must contrive to just satisfy a patient who has learned that the thing can be done for a price which he has every reason to believe is compensation for standard services, and, if he consents, he has done that which will make every accommodation afterwards easy in proportion to its practicability.

He must do up twice as many cases, put in twice as many fillings as he can do well, or he can and must do nothing; and if he is driven to under-working, and under-bidding the man who first put him upon the necessity, it is well, or rather it is not quite so bad as it might be.

Now the men who are engaged in this practice deserve to be told that they are engaged in degrading the profession, and ought, by the just rules of Medical and Dental etiquette, to be ruled out of it. Whoever is concerned to keep up its honor and reputation, is just as much concerned to put them down, and will, in all their professional conduct accordingly give them a *tremendous letting alone*.

They will say to him, we have seen other quackeries subside upon experience and with one voice we intend to settle yours in the same way. We made them open and declared enemies of the fraternity and just as soon as we can get you to put on so much honesty, your case is settled. We do not impeach your ability, but your professional honor, and one of these days your intelligent patients will be down on you like judgment day, and you may then fall back on the lane and alley practice which you have so assiduously courted. The older men care nothing at all about you now, and very soon you will be out of the way of every honorable boy in the brotherhood.

These cheapeners of talents and skill have, beside their direct depressing power upon beginners, a pernicious influence over them. They are usually great boasters about not only the number of patients which they have, but they talk like the fast young man who said, "he ran through Shakespiere one day and Euclid the next, skipping what he called the 'figgers,' in the the one, and the long speeches in the other." Speed,—speed,—is their cry, as if it were acres of ground they were ploughing

through, instead of achers of dentine they are concerned with—and they have as many reasons to give, (reserving always the true ones) for rushing through or over their work, as may satisfy any fool, and some novices in the practice. They do not seem to recollect that whoever works well enough is certain to work fast enough, and also that the character of the service is to be settled by the duration of the benefit, and not by the speed of its execution.

The man that can utter fifty words more in a minute than anybody else, might as well offer the fact to prove that he is a capital elocutionist, and the unhappy subjects of the gabble would be about in the same predicament with those that are the patients under such a scuffle of the dentist with time for the stake of a dollar.

I know not what amount of celerity in the finger-smithing of our art may be attained by those who aim at nothing else, and I know no use that such curious information would serve; I would look for, and could appreciate, such qualities in a sewing machine, or a nail-cutter, or a power-loom; but what has it to do with filling a tooth, or with fulfilling the Dentist's real duty to his patients? "Slow, but sure," would probably never have got itself into a proverb, but for the impudent pretentiousness of that heels-over-head-haste which it serves to rebuke.

Slowness and fastness alike are entitled to no consideration on their own account. Skill and integrity are not concerned about either; with them the question is, quality of execution, and time must take care of itself in the process, for it is of no account when the substance of the duty is secured.

The fast man is too fast to be trusted, the slow man too slow to be endured, the capable and honest man is neither the one nor the other, nor is he in any way concerned with the question of velocity, except as it is involved in the perfection of his work.

The subject of professional remuneration, it is admitted, is a difficult one to get into a fee bill. Rules would make it too stiff, and arithmetic too inflexible, but principles can govern it safely. Patients should pay for the skill that they need and the advancement of the profession which has charge of their

interests, and that pay should be a fair bid for the best talents and the most devoted attention which is required ; and whoever offers less, and whoever offers to accept less, deserve to know and to feel that they are unworthy of the services and of the ministries of the art.

Extortion of exorbitant prices is a sin against the trust reposed in a professional man by his patient, and in the last degree dishonorable to the one and injurious to the other, and no man but a ridiculous egotist or detestable miser, would so pick a pocket that is frankly opened to him. But this much may be said even for extra high charges in Dentistry, that every body may know the rate, and must be about as well persuaded as the operator that it is a good enough bargain before it will be made ; while on the other hand, the extra low charge is made the main inducement, and the operator is the only party to that bargain who certainly knows it to be a bad one for the patient, and so the money motive falls along with the prices, heavier the lower they descend. Lynching is the revenge of a rude system for the offence, and contempt is its correspondent in a higher range of life for the same thing—the offence being so much the greater, justifies the greater severity of the penalty—for, I take it an honorable man's scorn is heavier and severer than a short ride on a rail.

Here I very willingly leave the less agreeable subject of these strictures and turn to a point in professional conduct that, perhaps, as much as any other demands the attention of the faculty. I allude to counsel fees—charges for advice to our patients when no other service is rendered to them. In medical practice advice is *the* thing charged for. Whenever the physician is not his own apothecary, he has nothing else in his apprehension in making out his bill. If the account reads so many visits, so many dollars, though the word "*consilium*," happens not to occur among the items, you may depend upon it the doctor does not intend to be understood as charging only for the services of a runner, or messenger, or servant to his patient—one, or two, or three visits means just one or two or three advices, as many instances of skill and judgment in the case put at the service of the patient ; and however time and distance may figure in the

account, it is not pedestrianism or wages by the day or hour that is the substance of the charge—he never thinks of his muscular service as anything but a necessary incident to the exercise of the professional function, and names it only as a means of measuring the value of the science and skill exerted in behalf of his patient.

Moreover, he always charges *advice*, and that in proportion to its intrinsic value, charges it nakedly and independently when neither time nor toil make a sufficient figure in the service to cover its fair remuneration.

This is the difference between a learned profession and a mere handicraft. And, if Dentists intend to give their branch of the remedial art a fair position among the liberal arts, they must openly and distinctively estimate what learning and skill they have, and demand for the service of their brains a fair remuneration, and also secure for them a direct acknowledgement by their patients and by the public. A gentleman who has some time or other consulted a physician, surgeon, or lawyer, and knows what that intangible thing called professional advice is worth to him, and at what expense of time and toil and talent the power to give it has been acquired, takes his seat in a dentist's chair, his teeth are carefully examined, and without any handicraft services, he is advised to his benefit and assurance, and the dentist, because he has done nothing with his fingers, is as shy of charging for his professional judgment as if either his art were not a profession, or he could not modestly claim to belong to it, and therefore the conclusion is a settled one, that his office is a shop, and his art a trade—by his own showing.

To those among us who have some consciousness that this is below the dignity of our profession, but are without the courage to maintain it, I would say as Hamlet says to the poor players, who having neither the accent or gait of physician, surgeon, or dentist, but play a sort of journeyman character in the business: "Oh, reform it altogether."

I say charge for your advice, charge for the thing that your patients require of you, on the grounds of their confidence in you, and deliver your calling from a degrading depreciation. You know the claim to be well founded—make your patients

know it as well. It is the very thing they need to know, and their faith in it is the most valuable thing to them of all that their money can possibly purchase from you.

Some of us here present have lived through all the painful period of our profession's growth from the lowest rank in public estimation till it has secured a reputation level with its own highest demands.

It is the youngest branch of a respectable family ; in its childhood it was bound out to service, but its blood is gentle, its instincts noble, and it has only now in its well grown manhood to assert its natural rank and so secure it. Already it stands as a profession in the average clearer of quackery and incompetency than law, medicine or theology. Let its practitioners but walk worthy the calling wherewith they are called, and its public honors will very speedily answer like an echo to its just pretensions.

I need not press upon such an audience as this, the argument which concerns our own advancement, through the reactive influence of the fraternity. Every man capable of weighing the force of a professional standard, the influence of a professional ideal, acting upon the mass of its practitioners, knows better than he or I can explain, how mighty the power of opinion is, in the reformation of abuses, when that opinion touches the spirit-springs of enterprise and progress ; it is the trumpet charge that wakens the dullest dragoon to duty, and makes a hero of every common soldier. He looks to the floating standard of the corps, and the corporate enthusiasm carries him clearly abreast with the most generous spirit in the ranks.

I am speaking now to the representatives of our rising profession, and I know that neither hope nor faith is wasted on them. Upward, onward, is the impulse that is stirring in every heart, and there is not a laggard in all the ranks that *can* check our progress now. "We count not as though we had already attained, neither were always perfect, but this one thing we do—forgetting those things which are behind, and reaching forth unto those things which are before, we press toward the mark for the prize of our high calling in liberal learning."

EDITORIAL.

We have a few words of explanation and apology to make to the subscribers of the *Obturator*, and we promise never to bring before them anything of a personal nature prompted by any feeling but that of simple justice to them and our profession at large.

The second annual meeting of the American Dental Convention was held on the 6th, 7th and 8th of August. It was a good meeting, and accomplished it is to be hoped much toward the attainment of the ends sought by its participants. If its report does not show that close, logical, and minute exhibition of scientific investigation (which might be expected from a scientific body,) it has certainly done much toward fraternizing and connecting the bonds of union in our profession. We must remember, that this purely scientific investigation, is not often attained in popular assemblies. It is one of the evils of a purely democratic movement, that its character is generally of that desultory nature, allowing the exhibition of much, that is extraneous in matter and movement.

The first question, "The pathological condition of Denture in its nominal and abnominal state," was discussed by several gentlemen with ability, and so far as the examination of the simple question was adhered to, proved interesting and profitable, but much time was spent in a desultory discussion of the whole matter of filling, having little reference to the question under discussion.

The second question, "The best form of gold for filling," was carried through a very spirited discussion as to the merits and demerits of crystal gold, which in fact afforded the main topic of investigation.

Of other matters we shall speak hereafter. During the session of the convention, Dr. Elisha Townsend read a paper on Dental Fees, which was warmly received, and a committee of three appointed (by resolution) to report on its publication. That committee reported in favor of its publication by the convention, and a motion made in (conformity to common courtesy), that the same committee be instructed to carry the resolution into effect. The motion was put by the chair, and the ayes called for, pending which Dr. J. B. Rich arose and moved that a committee be appointed to publish it together with the minutes, at the same time announcing that he could with the great facilities offered by the N. Y. press, have it ready for delivery in three days. The other resolution was ignored and this passed, and of course the mover appointed the Chairman with instructions to give the Editors of the Journals immediate access to the address and minutes.

This resolution was passed on the 8th of August. To-day is the 11th of September, just one month after the time specified by Dr. Rich, as the time of delivery from the fast presses of N. Y., and still that point is not yet reached, and only 76 of the 93 pages are in proof, and we wait longer, in absence from our family, to redeem the pledge to subscribers to furnish the minutes as soon as a copy could be procured.

In regard to this matter of reporting and publishing the report and papers of the convention, it is proper to state here that at least four editions of Dental Journals went to the convention, willing to either separately or conjointly employ a competent reporter and furnish proofs to the convention, or any one else, at their own expense, and in the matter of the address of Dr. Townsend, we offered to give the convention either in pamphlet form, or in conjunction with the minutes, as many copies as were desired at the simple cost of paper and impressions, thereby saving the convention the cost of composition, &c., which will probably amount in that present case to hundreds of dollars above the plan proposed.

As to the fidelity of this report we have very little to say, except that some short and some long speeches will strike the eye of those who attended the sittings of the convention as entirely new, and some that took part in the proceedings of that body will not be found on points when not opinions, but *rights* were in question. We hope the convention will, like the Frenchman, "learn something very fast," before the next meeting.

NEW DENTAL DEPOTS.

Dentists in the South will find early this fall a good stock of teeth and materials in the NEW ORLEANS DENTAL DEPOT.

In addition to their present stock, will be found a full assortment of teeth from the New York Teeth Manufacturing Company. Address N. O. Dental Depot.

J. JENNING, JR., Agent.

ST. LOUIS DENTAL DEPOT.

Our friends in the West will find at Dr. A. M. LESLIE'S Depot on Market street, between 3rd and 4th street, a good assortment of Dental materials. Dr. Leslie is well known in the profession West, as a man of extensive practical experience, and it is something in ordering or selecting to know that a man who "*has been all along them*" is to fill the

order, and we know of no man in whose judgment and integrity we would sooner confide.

HELME'S RATCHET LATHE.

This certainly, is an excellent lathe. It has power without necessary speed for cutting teeth, and it has speed (as high as 800 revolutions per minute) for polishing. As sent out it is compact, and for permanent office use, the simple addition of the treadle instead of the stirrup, it makes one of the best things for the Laboratory ever offered. To our friends South we would say that the New Orleans Depot has them for sale.

FRANKLIN'S SAFETY LAMP.

We have for some time, a *warm interest* in this necessary article of the Dental Laboratory, and we certainly feel a warm regard for an effort on the part of Dr. Franklin, to shield others from our fate, in the use of alcohol in this shape, especially as our sufferings prompted the attempt.

In this he has probably succeeded in offering to the profession a perfect *safety lamp*. As this however is a painful subject, we will leave it for the present, expecting in a future number, to give some facts that will shew that this matter is no trifle.

Subscribers to the Obturator who may fail to get their numbers, will confer a favor by addressing (Box 17, C,) New Orleans, stating the numbers not received, when they will be promptly supplied.

THE DENTAL OBTURATOR.

VOL. II.

DECEMBER, 1856.

NO. 3.

OBTURATOR—CHIPS, NO. 5.

THERE is hardly a blessing in the rich catalogue of man's inheritance, that is not by him wrested from its legitimate adaptation to swell the list of human miseries.

Pleasure and pain may be the lot of human existence; but wholesale perversion, with its attendant results, surely is a self-inflicted curse.

It was not so intended, and the simple philosophy of life demands that we should avoid perversion, and seek only the legitimate, by which we should enjoy the most with the least alloy.

The duty is plain. But with that strange impetus by which human nature seems impelled toward extremes, we find almost the entire result of the two to be toward wholesale perversion.

Men either cultivate a shadow of self-conceit, or self-worship; holding in contempt all others, or they rush madly out among the struggling wrecks of human interests, with all the apparent license of "free-booters."

The misanthrope, holding in contempt the world and its follies, attempts isolation by hiding himself away in a kind of shell, which is fractured by inevitable contact, and then commences a life of useless attempts at repairs, until the unhappy man finds himself isolated indeed from all joy-giving sympathies, and encased in a very gossamer web of continuous fracture and rent.

"Poor man's plaster" may do for depreciated backs. But the poorest plaster, and (morally) the poorest man that wears one, is he who attempts the patchwork of the misanthrope. This is one extreme. On the other, we find him battling with eager competitors for a share of the spoils in a sharp trade, based upon human credulity, the only principle being that of mere lawful possibility.

But a man should "*be a man for a' that.*" To be a man, he must act like a man; made to live amongst men, to act with men. To receive, he must give.

The great question then is—what acts become men? How shall they best live and act in conjunction with others? To receive, what shall they give?

First. If man were a mere animal, to eat, drink and sleep, would answer all demands, and he might content himself with a rivalry with his dog (a doubtful contest). But it does not become men to live for entire animal or selfish ends.

It would be as becoming in him to assume the quadruped style of locomotion, and travel "on all fours" as for him to live with mere selfish or animal intent, and he as fully subverts the intent of nature's adaptation in the one case, as in the other. The only difference being, that in the one case he renders himself ridiculous, and physically uncomfortable, while in the other, he renders himself actually gross and criminal, for man cannot become his manhood without a recognition of principles involving moral duties.

Secondly. *How shall he best live and act in conjunction with others?* This is the most difficult problem of the social compact, for, as we have viewed it, he cannot shake off contact, and he certainly is bound to avoid contamination.

The difficulty does not lie so much in the proper control and adjustment of his own wayward nature singly considered, but while he has that to meet and conquer, he meets at every turn the wayward acts of others, involving of necessity his interests and consequent happiness.

It may be an easy thing for a man to live an aimless, semi-passive life, knocked about by the storms of passion and interest until the bubble floats away listlessly with the other useless scum on the troubled tide of society. But it requires *high faith in high principles* to live undazzled by the glaring lesser lights, with the eye steadily fixed on the great principles of truth and honor, which must be the guide of true manhood.

It may seem an easy thing for a man to edge through life "Carker"-like, to "smile and smile," and be everything to everybody, and by a kind of tortuous adaptation and counterfeit endorsement of everybody's notions, think that he can thus uncontaminated, dodge life's evils and responsibilities. It certainly is easy for him thus to merit and receive an abundant harvest of contempt from the very men he courts. But it requires manhood's soundest philosophy, installed in the heart as a principle, to fearlessly cherish the right and despise the wrong, and so act among his fellows as to induce others to follow his good example, and receive the honest respect of the good.

Third. *To receive he must give.* It is not dishonorable to receive a gratuity. But, it is dishonorable for a man to form plans of life on any other principle, than that of giving a strict equivalent for all that he receives.

This is so universally recognized by all rules of common equity, that the axiom needs but the simple statement to universal admission.

The foregoing we take to be the views of all honorable highminded men in all the various walks of life. To the merchant in his commercial transactions, to the mere traffickers in all the products of industry and appliances of comfort and luxury. If they are not essential to his mere subsistence without the pale of retributive punishment by conventional consent called laws, they certainly are essential to his standing among honorable men.

Let us take a man of this simply honest stamp from the busy mart of trade. A man with enough principle to entitle him to the name of a man, and then let us introduce him into the "Arcana of the Sciences."

Here it is not man that makes laws. It is not finite caprice that has marked out those luminous lines of truth, that we call traces of science. But here the great Creator has fixed with unerring certainty, immutable laws that govern and regulate every atom of the universe, and man must part with egotism, and all speculative wisdom, and accept the lowly position of a child-like student. If he is a successful student what will the effect be on his character? Can it be else than ennobling?

Is it possible that morally and intellectually he shall depreciate in the scale of manhood? Taking it for granted that he is improved, we will introduce him into our profession, ; one that offers two things eminently adapted to his improved condition. First, to a life of labor in the alleviation of human suffering, opening a vast field for the exercise of the highest moral qualities. Secondly, to a continuation of student-life highly adapted to intellectual acquirement, together with the opportunity of using all the knowledge he has acquired in the sciences and the highest stimulation to farther discoveries.

In this profession, as in that of medicine, a man must of course adopt it as a sort of consecration to usefulness ; calling into active cultivation the best principles and impulses of our nature, and barren must be the soil that will not bear some good fruit.

Now with all its adaptation to a higher life, what will be its effect on the character we have introduced? Shall we look for depreciation? Shall we find our honorable highminded student of science, degenerated to low servility, to degrading charlatanism? "Tell it not in Gath!" But such is the character of a majority of those who call themselves by our name, and profess to works consistent with the "high calling." We are not writing for the eye of the patient, but for that of our profession, and we judge that if "the truth is not to be spoken at all times," surely, we can speak of things "we do know, and testify that we have

seen," under these circumstances, and we proceed fearlessly, so it is truthfully.

Let us take for example any large city, say New York (it being the largest) and what do we see? There are not two score of Dentists in that large city, that any sane, well-informed Dentist in the land would dare trust his child to for dental care. There are hundreds there, whose depredations could not be repaired by an army of first class operators. Two thousand men all having the highest skill ever possessed by any operator that ever lived, could not in three hundred and sixty five days in the year, working ten hours per day, perform properly what they profess to do in less hours. There are bushels of teeth extracted every year, that Dentistry, as practiced by *some* in that city, could save.

There are thousands of teeth inserted, and of teeth stuffed at advertised prices, that would not pay half the price of material, if the operations were as good as represented.

This is no slander. There is not a dentist of competent ability there, but knows it, feels it, and deprecates it.

The city of New York is not selected out of any feeling of invidiousness. It is only because there it is unblushingly placarded and shop-windowed into a perfect "catch trade" companionship. It is because in that city there is more worthless work done under the name of dentistry, than in any other three cities in the country, and these facts are so well known that it affords a more tangible illustration of the fact. But New York is not alone in the disgraceful traffic. From all parts of the country, come the thronging spectres with gaping gaunt-mouthed testimony to the inhuman mutilation. They stare you in the face with hideous evidence to the beautiful facility of the work of destruction under the influence of frozen gums and chloroformed idiocy, showing how short is the step between an occasional blessing and a wholesale curse. We do not expect that every dentist will be a Hudson or a Maynard, and ought to exercise large charity in comparing popular operations with theirs. But is it not a marvel that the majority of all the work done under the name of dentistry, forms indubitable evidence not that they did not possess the skill, merely, but that they proved recreant to the principles of common honesty, even to that small stock recognized as essential to the lowest marts of trade? But it is not our object to present the picture of degradation. Our aim is a higher one, and these things are not greedily sought, but necessarily stated that we may reach a higher point of investigation.

Now where did these men, who disgrace us, come from? and what is the cause of so much corruption?

If they as men were originally honest, and as students of science elevated and improved, coming into the profession with the feelings and principles of gentlemen (for without this, they would disgrace any calling) where is the "pandora's box" that has opened on their character? What is there in our profession that has thus made "shipwreck" of principle and gangrened every human feeling in its exercise?

To a man lacking in the least in high unbending principle, *dentistry (in its popular acceptation) undoubtedly is more prolific in inductive dishonor, than any profession or honorable calling that can be named.* It is said that any of the laws of divine origin violated, will as surely bring a curse as any effect will follow a cause in the physical world.

Take for instance the gambler. At first he finds all habits of business, and taste for honorable toil vitiated. A little farther on in his career, and the abrogation of all the laws of right and wrong in his gains, receiving without giving an equivalent, he becomes a wreck in all higher principles of honorable life, and the withering curse settles down on his soul, eating out all that makes man noble and honorable.

What has worked the change? He has simply broken the command "Thou shalt not covet."

Men do not become bad all at once, and those vices are the most dangerous that are the most insidious and slowly progressive. This vice of gambling is of that nature. It is galvanized into respectability by a sort of popular code for genteel stealing, and gradually does the victim weaken his moral strength until he attains the low degradation.

It is precisely so that Dentistry presents its temptations.

We will suppose that a man has entered on what he deems the practice of Dentistry with the requisite knowledge and education (and what man "as is a man" would dare come into it without) and he stands over the operating chair and finds (as he always will) that twice the stock and labor are necessary to perform any given operation that he had expected. He is weary, or other patients are waiting for him, and all are anxious for a hurried operation. If he is immovably fixed in his determination to do exactly right, he will never leave that tooth until he has done all he can for its preservation. If he lacks one iota of that high intent, he will probably hasten the work, and by so doing gain an hour for another patient, and so commences his first little fault. He does not call it hard names, for instance a crime; for he says it is as good or better than his neighbors, and the patient was satisfied. But what has he done? He has by his very profession, promised that patient the full benefits of his best services at least (if not all that any dentist could do in the case) and he pretended to charge only an equiv-

alent, but the patient is deceived and swindled out of his money and a false security given, by which in all probability the tooth will be lost. That is a crime so far as the patient is concerned, but the worst point in the case, is the injury done himself, for the next time the temptation occurs, the dereliction will be a greater one, and so on, until the accumulated acts have become a habit, and he has become blinded by a sort of convenient belief, that he being better than some of his neighbors, is near enough right.

It takes constant, unwearied and continuous care, and seemingly unrequited labor to cultivate and rear, amid all the storms of interest, the delicate flower of purity until it forms the rugged tree of habit. But the weed of dishonor is of rank growth, and flourishes best, when the least watched. It is this that has caused our professional field to be so overgrown with evidences of gross neglect in its cultivation. It has been contentedly said by some dentists, that we are no worse, as a profession, than that of medicine. We at once repudiate any apology for crime—but the cases are not at all parallel.

The majority of unworthy practitioners of medicine, are those who begin by humbugging themselves, and are blinded by some specious theory into the belief that they are true "medicine men." But it is not so in our highly demonstrative practice. The veriest assinine bungler in it, of any observation or experience, knows mainly what is demanded to insure success in dental operations, and he can put his finger on the very inception of disaster, and it is absurd to place its malpractices in the scale with the practice of medicine.

We have very little respect for the men who do not know that much more is demanded of us, than of the physician. The great study of his life is to know what to do, as he wanders among the mysteries of life and health.

We know, as a profession, ten times more than we perform, and the great error of even enquiring minds in it, is that we are constantly seeking some machine, "steam-age" process for doing, without the labor of doing well, what we know very well how to do. Our profession wants, and we trust will have all the light that science is so richly showering on us, and we shall improve in our knowledge of both the art and science. But we need a more thorough conversion to higher principles of practice.

We need to practice on principles that "*become men.*" We need to practice on the strict principle that "in receiving, we give a just equivalent." We need to practice as gentlemen of a liberal profession, who recognise the high trust that is placed in our care, on which depend the comfort, health, and even life of our fellow beings; and we are recreant to every principle of our high calling, if we abate one iota of

toilsome endeavor, even to the last motion of patience, to give those who confide in us, our best and highest endeavors at rescue, from disease and mutilation.

ART. II.—CHANGE OF LOCALITY.

About every third Dentist one meets, (in a summer's travel) is just on the eve of a change of location, or, at least, very anxious to do so. There may be circumstances that would make it policy to do so, but as a general thing, say in nine cases out of every ten, it would be bad every way. The main causes, are something like the following :

First, A dentist visits some flourishing town or city, and forms the acquaintance of some of the profession, who seem to be enjoying a very fine practice. The visitor is warmly greeted, and treated as many gentlemen of our profession know how to treat a visitor and guest. He is invited into the family circle, and he enjoys the genial hospitality, be it more or less splendid than he is accustomed to, it certainly is cordial ; and he feels happy, and though he does not envy, he at once becomes emulative of the position.

How he would like to see his dear little family in such happy circumstances, or, perhaps, he feels proud of a comparison, and he imagines how his *own* would give that piano "particular fits," how they would adorn those splendid rooms, or, astonish that cosy little parlor.—He spends a few hours in the operating rooms, and all he sees consists of a succession of untraveled cases, while the patients seem all the best pleased, and most civil and appreciative people in the world, and then such prices as they pay, and cheerfully too. A light seems to break in on his hitherto false position.

If he is a modest man, and candid with himself, (a rare quality) he feels how great would be the privilege of frequent intercourse with such men as neighbors ; and he contrasts it gloomily with the selfish and uncongenial set with whom he is compelled to "herd" at home ; and then, too, how much he could improve with this higher contact with men that he feels are his superiors, as operators. With these feelings, he desires to change his location. The impulse is good, and highly creditable to his character, personal and professional, but his estimate of things is probably faulty.

But, perhaps we have mistaken his feelings ; perhaps, his entertainer, with perfect frankness and sincerity, has taken no pains to show off to good advantage, and has spread the plain unselected exhibition of cases

and operations, containing nothing very striking or surprising, and our visitor gathers as he goes along, a rich harvest of self-gratulation in the feeling that he can beat that "all the time," and he has just found out (what he has for a long time "suspicioned") that he has never yet been half appreciated. The world has not yet been made aware of how much she has lost in not knowing him, whilst there is no knowing how much he has lost by his false position in "casting pearls" to the common herd that "lay about loose" among the hills and valleys where he has thrown away years of his precious life.

A certain young man having passed his collegiate and theological course, on being duly examined and licensed to preach, presented himself at the rooms of the Home Missionary Society, and applied for a situation to labor in some "vacant field." He was told that they could not give him employment immediately, but that they would do their best to give him the first that should offer. Months passed away, and he continued to call at the rooms daily for said "vacant field." At last, the venerable Secretary said to him in answer to the stereotyped enquiry, "My dear sir, *the world is a vacancy*, and the '*field is all whitened for the harvest.*'"

The same views embodied in that reply are fully applicable to all who have truly embraced our profession, and entered on its duties with the right motive and appreciation. Its responsibilities, its opportunities of usefulness, and its field of enterprise, is not small. There, (unfortunately) is not a town or village in this country, that does not open to the faithful dentist, a wide field for usefulness, and abundant demonstration of its utility and blessing. Shall we say what are the real obstacles in the way of a successful and contented practice at home? In the first place, the picture of other men's successful practice is a beautiful illusion. We see but the outside. There is no account taken of the years of toil; of painful struggle with ignorance; false estimate and ingratitude that paved the up hill of those years that marked the progress, and laid the foundation of success.

At home, he is feeling all this. There is Col. A., who has a little money, or, Major B., who has a little influence; who have presumed on both to attempt to subjugate him to their selfish whims or dictation, and having been foiled, hold him in professed contempt, and his keen sensibilities writhe under it. But he was not in that same model office when Col. C., was politely informed that any further operations were declined, for him or his money, or Major D., on the application of an opprobrious epithet was carefully led out of the office by the ear, and how by a steady course of manly self-respect and untiring labor, he has won the confidence of better men and secured better patients.

At home, he meets the results of his mistakes. It was a sad and humiliating mistake that he made when he, so poorly armored to grapple with the most hidden and insidious of all diseases, hung up his cart-wheel sign of "Surgeon Dentist," and offered himself as competent to the task ; and it was most unfortunate that, under this assumption, he promised to his first patients, what a few years of experience told him he could not perform, and which he now sees with regret. But he was not with his model entertainer when that honest man told his patients that he had erred ; that he had permitted himself to be overruled and not to only promise too much, but to perform too rapidly, and with too little thoroughness his former operations, and that for the future, they must not tie his hands and then ask for miracles. He was not with him in those days of honest endeavor by doing all he could to repair the injury, although it required unrequited labor and stoek.

He was not there when he refused to comply with the patient's earnest sollicitations for operation that would put money in his pocket, and the stain of guilt on his conscience ; when he knew that his neighbor would not only do it and get the money, but in all probability a succession of cases by its influence. He was not with him in the hour of darkness when he felt that his friends were weak, because they could not, or would not, believe that he was else than a fool for not doing as other dentists did in securing patronage, and when in the darkness, he turned his eye from the glare of present interest, to the star of hope, that bid him labor and wait for the final success of manly acts.

He has visited him in his days of triumph, when he has made his weak friends strong ones, and wrung that meed of just praise from the good and worthy, that is sure to follow a demonstration of honest principle. Let this man of change look at home and see if it is not an ample field for him, or any other man of spirit and enterprise, who is satisfied with legitimate success. Then he has spent years, perhaps, in making his investment of labor in laying a foundation for success. He, of course, has always, as a man, been found perfectly reliable, and if he has faults to rectify, they are entirely professional, and hard work, and honest zeal, and the steady reliance on the success of good works, and the time will come, when others can sit down with him, for the successful entertainer, gladdened with the sight, as we have been, in many a happy home that we wot of.

ART. III.—“WELL ! WHAT DOES IT ALL AMOUNT TO?”

This question has been repeatedly asked concerning the late Annual Meeting of the National Convention in New York.

It might be answered “much every way,” but chiefly in establishing a higher appreciation of our ethical relations to each other, and our profession.

As a profession, we need all the products of genius, we need the fruits of scientific research and application, we need an exhibition and an accumulation of all the utilitarian facts that can be brought to the great storehouse.

But, primarily as means to this end, we need more, a higher appreciation of the nature of the demand for the use of these our means.

High aims alone, produce high achievements. The man whose ambition in mathematics is satisfied with the knowledge of working in simple addition, will never accidentally stumble on the *calculation of eclipses*, or the return of the eccentric comet.

The common coal heaver of New Castle, understood the cry of “stand from under,” as well as Sir Isaac Newton, and to those years of useless star-gazing, might have retorted, “what does it all amount to?” as he held to the philosophers nose the shining sixpence, the result of a day’s labor.

The barber surgeon, he of striped pole notoriety, might have applied the same trite remark to the discoverer of circulation, while pocketing his phlebotomising fee.

There is no comparison between a Fulton, a Morse, or a Maury in their labors in the introduction of the great revolutioners of commerce and intelligence, and the rock-splitting McAdam of “turnpike” notoriety.

A man that is legitimately, and even obscurely useful, may not justly be despised, but where shall we look for those high achievements that minister largely to human weal.

Shall we expect large additions to nautical science from the horizon-bound intellect of the busy oysterman that plies his pirogue over the waters of Lake Borgne? or from a Maury, who maps the world of ocean, led by a high appreciation of its adaption to the commercial interests of all nations?

There is as much difference between the penny whistle stamp of tooth-stuffers, sawers, and exterminators, of popular dentistry, and the true gentlemen of our liberal profession in the great incentives to improvement, arising from right and high motives, as there is in any of the cases named.

There are men who do not settle every question by that agrarian test, "will it pay."

There are men who can look their patients in the face, and feel that they would be willing to have such operations as they have served them with, repeated in their own case, did they have cause to seek a dentist?

There are men who feel that the interests of their patients, and their own are identical, which leads them to as much anxiety to advance the means of dental assistance to others as they would, were they the suffering patient.

These men, will naturally seek intercourse with each other, without a thought of "profit and loss" in the act. They certainly do have motive, but it is of a high and honorable nature. They may have ambition, but it is a laudable ambition, emulative of good, rather than selfish ends. We pity the man without ambition, for he is a man without aim.

The best evidence of the possession of these sentiments on the part of many who attend our yearly meetings, is, that they are willing to place themselves in the way of imparting, without stint or reserve, to some at least, who may be benefitted, while they acknowledge that they have much to learn, and show that they are not only willing, but anxious for an exchange.

ART. IV.—SELECTED AND CONTRIBUTED ARTICLES.

We present with much gratification, an article by Professor Watt, read before the National Convention, and published in the Dental Register, on Topical Remedies on Inflamed Dentine, and also one contributed from Dr. James S. Knapp, on the subject of Sensitive Dentine.

It seems to us, that this is enquiring in the right direction, and shall have no fear of this subject becoming as painfully tortuous, or hackneyed, as that old bore of "springing plates."

It may be remembered by some, or seen in the "*very lucid reports*" of the last Convention, that we were comparatively satisfied with direct surgery in common cases, presenting only superficial caries, but, that we wanted light on the subject of those deep-seated evidences of danger to the vital organization of the tooth; that to know *when to cut* and *when to treat*, was the great question of interest.

In the articles above named, our views of the unsuitableness and danger of arsenious acid, are fully expressed.

It will be remembered, or may be seen, as above, that we attempted at the Convention to get at a proper use of the term inflammation, in regard to its application to dentine.

The question we put to the most voluminous and extensive writer on Dental Science, (the worthy President) was, and is also an interesting and we deem it a valuable one ; but in that place, as might have been expected, it was a short lived enquiry, (like its predecessor.) These questions we do not intend to lose sight of.

We cannot too strongly commend the necessity of bearing in mind, the following remarks of Prof. Watt, in the pursuit of all enquiry in this direction :

“Many difficulties lie in the way of reliable experiments, in relation to the reactions which take place when chemical agents are brought in contact with dentine. It will not do to depend on their action on the tooth out of the mouth ; for then the chemical affinity is not counteracted by vitality. Neither can we rely on the reactions set up by them with gelatin, albumen, or the various earthy salts of which dentine is composed ; for, in that case, affinity is counteracted neither by vitality nor by the cohesion of the tooth. But, though we cannot learn all that we wish to know from these experiments, still we can learn much that is both interesting and useful.

“By making due allowance, in each case, for the circumstances present to modify affinity, and by comparing the results with those we witness in the living teeth, as, from time to time, these agents are applied, we can arrive at conclusions much more reliable, as a basis for practice, than can be derived from any series of empirical experiments, even though it extends to millions of cases and claims the accumulated light of generations.”

We regard the article of Prof. Watt, as one of the best that has been given to the profession, and while we commend its practical, and we believe, correct views, it seems to us that the term “Inflammation,” is misapplied in the heading of that article, and we think the Dr. will ere long discover, the hitherto popular mistake.

Inflammation, increased circulation, and suppuration, are phenomena with which we are all acquainted.

Can we detect such conditions in dentine ? Will not pyæmia, according to Liebig a species of slow “combustion or oxidation of organic matter,” be found to be the true disease called caries, and the first true inflammation in the case, be found only in pulp exposure or contact, and will not exalted sensibility account for all the other phenomena of sensitive dentine ?

ED.

SENSIBILITY OF DENTINE.

BY JAS. S. KNAPP, D. D. S.

Men of research and experience have written upon this subject, and its causes and remedies do not escape discussion in Dental Conventions. This is right; for it is not likely to receive more investigation than its importance demands.

While I have read and heard opinions corroborative of my own, I have read much that, for one, I would be far from endorsing.

Professor Robert Arthur, of Philadelphia, in the last American Dental Convention, called it an *unhealthy* and an *abnormal* condition. The view may be right, as far as regards extreme sensitiveness, as induced by decay, general nervous irritability, &c.; but I cannot see the explanation of this general assertion in the well-known fact, that perfectly sound dentine possesses this property as a general rule, and to a degree *painfully* great.

I see not why so many have chosen to apply the term *inflammation* to the ordinary sensitiveness as found in making preparations for plugging, nor why, if we so well know that it is increased by the causes mentioned, and by the fluids of, and that enter into, the mouth, we should conclude that sensibility is not the normal condition of dentine.

I need not speak of the different degrees of intensity evinced in different parts of the same tooth, in different teeth in the same individual, and the marked difference in the variety of constitutions, or the differences found in the same individual at different times, and under the changing phases of health, and physical and nervous irritability.

I need not speak of those microscopically minute ramifications of nerves from the main trunk in the centre of the tooth, that convey life and a high organization to the line of membrane as delicate as any in the human body, separating the enamel and the dentine, or of the tubular structure of that body. All this has been treated at length by abler minds and hands. It is enough for our present purpose to think of these things, and to keep in mind the structure and delicate organism of the tooth, in order to admit this sensitiveness to be the *normal* condition of dentine.

However rapidly the dentine of a sound tooth may be mechanically entered or cut, or if touched immediately after being broken, I doubt if it can be done on one individual in one hundred without causing considerable pain; and must that, too, be called "inflammation"? In fact, if we do not find it after having removed the more carious portion, and arrived at the sound bone, are we not justly led to the suspicion that the tooth is dead? And if we have removed the plug of a *sensibility*

obtunder, and begun to open into the region of *fatid vapors*, do we not fear that the *foul* work of arsenic has done the deed?

Among the various remedies proposed for this tenderness is the use of escharotics, such as cobalt, (arsenic in its crude state,) arsenious acid, chloride of zinc; and astringents, as tannin, benzoin, &c.; but the most ludicrous one is given by the member from Newark, N. J., who *edified* the last American Dental Convention, and was elated by his success in "painlessly removing the brown decay, generally in a *continuous lump*, after having applied his finger, covered with a napkin, to the edge of the gum in contact with the decay, and pressed with great force." Aside from the small advantage derived in thus depriving the cavity of its saliva, I cannot see the philosophy of alleviating the pain of excavating, by pressure either of the finger or "finger nail," as he in the same connection recommends.

And I am just as firmly of the opinion that several of those articles mentioned cannot be used by my hands, and with my best judgment, without decided injury. Others *may* be more successful.

Professor Arthur is also reported to have remarked that "He had not seen any instance of the destruction of the vitality of the tooth, even after the lapse of many years, where arsenious acid had been used."

I would merely ask, where were leather spectacles in those days?

If there be a point, (and I doubt it) in quantity and in time, in which arsenious acid can be safely used for destroying sensibility of dentine, without being so absorbed as eventually to reach through the intervening layer or layers of bone, and taking the life of the pulp, it is, in my humble opinion, so uncertain whether the mark be hit, that I should prefer to avoid the use of such deadly weapons where I did not *intend* to kill. I say this in the face of the experience of those who have used the remedy mentioned, and I am glad that other minds than that of the writer bear testimony to the just fear of the use of such agents for tender dentine. Dr. Ballard, of New York, gave to the last American Dental Convention an experience of his treatment of those de-vitalized teeth, sacrificed in the use of arsenious acid and cobalt by some who had operated upon them before him. Other eyes than his or mine have been pained to see the marks of alveolar abscess, the dingy color, and feel the *dead cut* of the bones of hundreds of teeth, from the delicately formed incisor of the lady patient to the strongly made molar of the "sterner sex," but slightly decayed, and the vitality of which was sacrificed to the desire of the patient to have the operation performed without pain, or to the avidity, aye, the dishonesty, of the operator, who *felt* more for the dollars in his pocket, than for the life and safety of those invaluable members of his patient, when he could, in a

sitting of ten minutes, so apply the remedy to obtund the tenderness of as many "shining pearls," that in another sitting he could clean and plug, in a given time, twice the number of cavities that he could if the *life* that nature made, had been retained to perform its very important office, and to *beautify and adorn* the useful masticators and incisors.

If we use discriminately some simple astringents, as tannin and benzoin, some little good may result, but certainly no harm; and if chloroform can be retained in the tooth for one minute, the pain of excavating will be greatly diminished, as any one knows who has tried it; but if, from position or case, nothing can be used to allay the sensitiveness, let not the hands of the operator be stayed from performing his duty to himself and to his patient, for he will not be situated like Aaron of old with a friend on each side, and an army to fight his battles for him. But by patient reason and by a courageous heart, must he encourage his uninformed, timid, suffering patient, who will either yield to the demands of the case to bear all the pain necessary to a thorough cleansing and shaping of the sensitive member, or else would be named under the head of that class, who, as a physician truly remarked, *were not worth curing*.

In a practice of more than eleven years, I am happy to state that I have not had more than a dozen who came under this head, and who were not willing, for their own personal interest to bear all pain necessary to save their teeth, and they, doubtless, afterwards applied to the men who used the infallible remedy in order to perform "Painless Dental Surgery."

After the cavity is entirely prepared for the introduction of the gold, there are occasional instances in which its quality of conducting cold to very tender dentine occasions much pain. To obviate this, in a measure, the gold may be *warmed* in an earthen vessel that will retain its warmth a sufficient time, and the temperature of the material being about the same as that of the tooth, it may be placed in the cavity with less pain than usual in such cases. Or a thin piece of gutta percha may protect the sensitive dentine as a non-conductor, as practised by many, and thus be retained under the plug, without, as far as I know, the slightest injury.

Patients like to have their plugging done as easily as possible to themselves, and if as peevish as many of them are in our Northern States, and as short-sighted as some, they desire *cheapness*; and there are *legions* of so-called Dentists, both North and South, who are either unable or unwilling to inform these people; and are equally anxious in rapidity of operating, and in returning gold to their pockets, without having rendered to their patient its equivalent.

Patients often try to influence us to do wrong, but under what code of honor or justice are we compelled to do "Dentistry to order?"

If the denunciations of the poet followed "the man who needlessly sets foot upon a worm," what shall be said of him who commits such wholesale depredations on the beautiful organism of a human tooth? Alas! who shall restore life to the 'dead? Who will restore brilliancy and partial transparency to the clouded, mal-treated tooth? Who will aid in making such *attempts* unnecessary?

Will not some of those, who have an ambition for becoming "painless operators," try to *save* their patients' teeth—vitality, brilliancy and all—and *save* them from the dark spectacle which greets the eye of a friend so unpleasantly? Will not they do all in their power to save the long pangs of periostial inflammation, and the unsightly appearance of swelled faces, and to prevent the loss of the only ornaments to the "Human face Divine," that nature ever intended so to prepare the pleasant food that it might suitably, and profitably to mind and matter, nourish the wasting, wearing body?

ART. V.—THE ACTION OF TOPICAL REMEDIES ON INFLAMED DENTINE.

BY GEORGE WATT.

Read at the American Dental Convention, August 7th, 1856.

Local remedies, generally the main dependence, and often the only resort of the dental surgeon, in the treatment of the diseases intrusted to his care, should be carefully considered and thoroughly understood by him. It is true that constitutional remedies are frequently required in the treatment of dental disease; and it is probable that we are often inclined to neglect the general, and rely on the topical treatment; yet, in inflammation of the dentine, from the nature of the tissue involved, it is evident that, in a majority of cases, the local is the treatment indicated.

The reader will please bear in mind that we now have nothing to say on irritable or exposed pulps, but that our remarks apply only to cases of exalted sensibility of the dentine.

For the sake of clearness, let us bear in mind that dentine, like other bony tissue, is composed of animal matter and earthly salts; that it possesses vitality; that its various constituent parts are capable of uniting chemically with other substances, and of undergoing chemical decomposition; and that it is sustained in its present state of existence by the combined influences of affinity, cohesion, and vital force.

Many difficulties lie in the way of reliable experiments in relation to the reactions which take place when chemical agents are brought in contact with dentine. It will not do to depend on their action on the tooth out of the mouth ; for then the chemical affinity is not counteracted by vitality. Neither can we rely on the reactions set up by them with gelatin, albumen, or the various earthy salts of which dentine is composed ; for, in that case, affinity is counteracted neither by vitality nor by the cohesion of the tooth. But, though we cannot learn all that we wish to know from these experiments, still we can learn much that is both interesting and useful

By making due allowance in each case, for the circumstances present to modify affinity, and by comparing the results with those we witness in the living teeth, as, from time to time, these agents are applied, we can arrive at conclusions much more reliable, as a basis for practice, than can be derived from any series of empirical experiments, even though it extends to millions of cases and claims the accumulated light of generations. Additional light may also be obtained by noticing the topical action of these remedies on the soft parts, and on the fluids of the system.

Local or topical remedies produce mechanical, chemical, and vital effects. It is of the chemical that we propose principally to treat. An agent whose action depends on affinity, even though not capable of producing a chemical change in the tissue to which it is applied, may still be properly ranked as a chemical remedy.

The action of a chemical remedy depends on the strength of its affinity for any or all of the constituents of the tissue on which it acts ; on the texture of that tissue ; on the nature of the resulting compounds, and on the presence or absence of modifying circumstances. Other things being equal, combination takes place with far more energy between liquids, than between a solid and a liquid, or two solids. This is because the solid state prevents that closeness of contact necessary to an energetic manifestation of affinity, which acts only at insensible distances, and because the cohesion of the solid prevents that mobility of its ultimate particles which is necessary to combination. A soft or porous body is, therefore, attacked by an agent incapable of acting on a more dense one of the same composition. The relative action of a strong acid on chalk and marble will illustrate the point in consideration. The more dense the dentine, then, the greater is its capability of resisting chemical action.

The tendency of any substance having a strong affinity for organic matter, when in contact with living tissue, is to overcome the vitality of the part, and unite with one or more of its constituents. Substances capable of producing these changes are called *caustics* or *escharotics*. The

destruction of vitality in one part produces a change in the vital actions of the surrounding parts, usually resulting in inflammation, or, at least in exalted vitality. The whole action of these agents is, therefore, a *chemico-vital* process. The vital action thus aroused is in proportion to the amount of the disturbance, and to the vitality of the tissue. In the dentine, therefore, the chemical will generally predominate over the vital action; although in some of the soft parts, possessing abundant vitality, the reverse is often the case. The vital force may, in some cases, be able to prevent the escharotic action of these remedies, if they are diluted, or if the energy of their affinity for organic matter be in any way diminished. An immediate chemical change may thus be prevented, and the life of the part preserved; but the vital action is disturbed and altered. The active force is here still supposed to be affinity, and the effect is termed irritation. A prolonged application of weak chemical agents, however, will finally produce slight changes in the composition of the tissues, without causing the death of the altered parts. A caustic may, accordingly, become either an irritant or an astringent, by dilution, or any other means by which the energy of its affinity for organized matter is lessened.

Water, albumen, fibrin, gelatin and the calcareous salts are the constituents of dentine, on which the various chemical remedies in use exert their action. And, it may be added, that agents inducing caries expend the force of their affinities on the same constituents. For example, nitric acid coagulates the albumen, dissolves the phosphate of lime, and decomposes the carbonate—in short, it acts chemically on every constituent of dentine, and its action ceases only when it is neutralized by the various combinations which take place. The same is true of hydrochloric acid, but not to the same extent; for a dilute solution of it spends its force almost entirely on the calcareous portion of the tooth, leaving the gelatinous portion behind.

The caustic alkalies act by their affinities for water, albumen, fibrin, and gelatin, which are very powerful; but, having little or no affinity for the earthy portion of the tooth, their action on dentine is less violent than that of most acids. The calcareous matter predominating so greatly, shields the gelatinous portions, to a great extent, from the action of such agents. The action of these agents on solid albumen, &c., is more like ordinary solution than definite chemical combination.

The character and texture of the compounds, resulting from the union of escharotics, or astringents, with any or all of the constituents of a living tissue, will, if carefully observed, do much to enable us to select the proper remedy for a particular case. The points important to be noticed are, whether the resulting compound is soluble, or insoluble:

and, if insoluble, whether it be permanent, or liable to rapid decomposition. On this point, experiments out of the mouth, with medicinal agents, on the various organic constituents of dentine, will give much important information. As an illustration of what is meant, let us compare the action of a caustic alkali with that of creosote, or a kindred substance. It is well known that the alkalies dissolve and hold in solution solid albumen, fibrin, and gelatin. Now, if one of these be applied to dentine, the animal portion of its substance is dissolved and removed, leaving the surface, with its increased vitality, amounting to irritation or inflammation, exposed to the action of the atmosphere, the fluids of the mouth, and any irritating agent that may be brought in contact with it. It is evident then, that the exalted sensibility of dentine is not likely to be relieved by such agents, unless applied in quantity sufficient to dissolve the gelatin to such depth that the undissolved calcareous matter becomes a protecting surface.

On the other hand, the application of creosote, or a substance possessed of similar chemical properties, is followed by a union of the agent with the organic constituents of the dentine, resulting in the formation of an insoluble compound, retained in place by its mechanical connection with the calcareous portion of the tooth, forming a perfect protection to the parts beneath, which, by excluding all foreign substances, permits the newly aroused vital actions to perform their proper functions, in restoring the parts to health.

Another point to be noticed, in this connection, is the fact that the soluble compounds thus formed in dental cavities are liable to be absorbed, and thus produce the specific effect of the remedy on the whole body of the dentine, as well as on the pulp, while the absorption of the insoluble is, in the nature of things, simply impossible. And this leads to the important distinction, already alluded to, between the insoluble compounds which are permanent, and those which are readily decomposed. The former, as already stated, cannot be absorbed, while the latter often are. Those formed by the action of tannin, or chloride of zinc, represent the one class—those from arsenious acid, or chloride of mercury, the other.

It is important to bear in mind that the agent possessing the strongest affinity for the constituents of dentine is not necessarily the most energetic in its action. Tannin manifests a powerful affinity for albumen, fibrin, &c. ; but, as the resulting compound is insoluble and permanent, the very energy of the affinity prevents the full force of the remedy, by the almost instantaneous formation of a protective layer, which guards the subjacent parts against the further action of the drug. This remedy is, therefore, practically mild in its operation, its action being neces-

sarily confined to a thin superficial layer, whether the quantity used be great or small ; yet, to the extent of its combination with the organic constituents of the tissue, vitality is as thoroughly overcome as it could be by the actual cautery.

On the other hand, chloride of zinc, though manifesting less active affinity for the organic constituents of dentine, is, at the same time, a far more active remedy. This arises from several causes. It manifests a powerful affinity for water, and in removing this from the dentine, it prepares the way for its own admission, and, at the same is dissolved, and is thus in a better condition for exerting its other affinities, which are in no degree impaired by its union with the water. The compounds resulting from its union with albumen, &c., are more soluble than those formed with tannin, and consequently present a feeblar barrier to the action of the remaining portions of the drug. The combination taking place less rapidly affords time for the agent to penetrate the dentine to a greater depth. And besides, the chloride, in contact with organic matter, is gradually decomposed, and thus a limited portion of its chlorine is liberated, and unites with the calcareous elements of the tooth.

In the language of Pereira,—“The components of the living part, when combined with any of these substances (which form with them insoluble compounds,) are less susceptible of decay and decomposition than previously. Hence they are unfitted for the principal property which appertains to their vital condition, viz : that of suffering and effecting transformation.” It is on this principle that these remedies exert an antiseptic influence ; and it follows that the agent which produces the most permanent insoluble compound with the constituents of the tissue, is the most reliable local antiseptic ; while those producing compounds more soluble, and less permanent, often exert a more extended antiseptic influence on large masses of organic matter, simply because they pass into its substance more readily, and to a greater depth. It is well known that the antiseptic influence of tannic acid on the dead skin is perfect, leather being merely tannate of gelatin, while that of arsenious acid, or chloride of mercury, is imperfect. At the same time, by injecting the vessels of the dead subject with either of the latter substances, putrefaction is for a long time prevented, while an injection of tannin could preserve but little, if any, more than the vascular tissues, on account of its inability to pass out of the principal vessels, owing to the nature of the compound it forms with their organic constituents.

Some of the remedies which exert an antiseptic influence act, at the same time, as disinfectants. The chlorides which undergo partial decomposition, when in contact with organic matter, are the most striking examples of this class. The liberated chlorine decomposes the putre-

fective agents, and effectually destroys the attendant fetor. The carious portions remaining in the cavity, therefore, cease, for the time, to be a source of irritation. This, added to the protecting power of the decomposed layer, which is insoluble, explains the fact that when chloride of zinc or terchloride of gold is used on a diseased surface, whether of the soft or bony tissues, the parts beneath the decomposed surface are found healthier than before the application, and more so than when an escharotic of a different class is applied.

By bearing in mind the laws of combination, and the doctrine of chemical equivalents, we might be led to conclude that, when the affinities are equal, the energies of chemical remedies are inversely as their combining proportions; but, that the rule may hold good, not only the affinities, but all the modifying circumstances must be equal. It is certainly true, that if two agents manifest equal affinities for the same constituents of dentine, and the resulting compounds are of the same texture, their *modus operandi* must be the same. In such cases, and only in such, is the activity of the remedies inversely as their equivalent.—The equivalent of creosote is 94, that of tannin 212, and the practical activity of the two remedies bears some proportion to these numbers; but if we notice the *modus operandi* of creosote, we will see that its practical energy is much increased by its capability of dissolving fats and other organic substances, thus removing these obstacles to that intimate contact necessary to chemical action. On the other hand, we have seen that but a limited quantity of tannin can be made to act on any surface of organized structure. It follows, therefore, that the practical activity of the one is greater, and that of the other less than is indicated by their equivalents.

It is hoped that the reader already appreciates the fact that there are important differences, both in the modes and in the results of the action of chemical remedies for inflamed dentine. Due discrimination, and accurate judgment are, therefore, necessary in selecting the remedies for any given case. The state of the general system, the physiological structure, and the pathological condition of the tooth must be understood before it is possible to know the treatment indicated. Then, the remedy most likely to fulfil the indication is to be selected, and without a knowledge of the *modus operandi* of each of those from which the choice is to be made, the selection is, at best, but mere guesswork.

That we may have a clear understanding of this point, let us briefly notice two or three different conditions of the dentine, which may require treatment. Take, for example, a tooth in which the whole body of dentine is inflamed, or at least has exalted sensibility. Now, it is evident, that cutting out the sensitive portion is not the plan for this

case, for layer after layer may be removed till the central cavity is reached, and the sensibility may be increased during the entire operation. The patient is therefore tortured to the limit of endurance, while nothing is gained. Nor is the sensibility immediately relieved by the influence of a remedy whose action is limited to the surface ; for when the vitality of a superficial layer is thus destroyed, an attempt to remove it demonstrates the fact that the sensibility of the subjacent parts is in no degree diminished, but rather increased. The sensibility in this case, however, may be promptly and totally subdued by an escharotic, which from its *modus operandi*, is capable of exerting its action on the deep-seated, as well as on the superficial parts ; and those who wish to resort to this mode, will find arsenious acid all they could desire. This course, however, seems to us much like that of the woman who strangled her bed-ridden husband, by way of "helping to ease his misery."

The course we prefer, in such a case, is the application of an agent which produces an insoluble and permanent compound with the gelatinous portion of the tooth, thus preserving the parts beneath from the influence of irritating agents, till the case has time to terminate in resolution. This protection should be rendered more complete by the insertion of a soft filling into the cavity ; and the termination may be much facilitated by constitutional treatment.

In other cases the exalted sensibility may be confined to the surface of the carious cavity. In such, agents which exert a prompt, yet superficial action, will accomplish all that is desired. The selection will depend somewhat on the circumstances of the case, and will be better understood, after the consideration of the individual remedies.

In some cases the inflammation is confined to one or more minute points in the cavity. Then the sharp cutting instrument is often sufficient to overcome the difficulty. When it is not, the treatment suggested for the preceding case may be resorted to.

In considering the individual remedies for inflamed dentine, we do not propose to notice all that have been, or that may be used with advantage, but only a number sufficient to accomplish the various actions indicated, and to meet the ordinary demands of practice. We will not attempt a classification ; for in the limited number under consideration nothing could be gained by it.

The first that we will notice is :

TANNIN, OR TANNIC ACID.—Tannic acid is the active principle of vegetable astringents, and is found more abundant in nut-galls than in any other product. It manifests strong affinities. It is soluble in water and alcohol, and slightly so in ether. It unites with albumen, fibrin, and

and gelatin, forming with them insoluble tannates. It thus enables us to detect gelatin when dissolved in several thousand times its weight of water. Its medicinal action is almost necessarily topical; for the promptness of its action on, and insolubility of its compounds with albuminous substances, prevents its admission into the general circulation. And this is the sole reason that the vegetable astringents are comparatively mild and innoxious in their action; for a single grain of tannin, if conveyed directly into the blood, would cause instant death.

The action of tannin on dentine has been already explained. Either its watery, or alcoholic solution may be used; the latter is the most convenient, in some respects, as the former suffers decomposition by the absorption of oxygen from the atmosphere.

CREOSOTE, OR CARBONIC ACID.—This agent produces its caustic effects by its affinity for albumen and gelatin; and its antiseptic influence arises from the fact that it forms with these substances insoluble compounds.

The creosote of former years was obtained from wood-tar; and in some respects it differs from that in present use, which is prepared from coal-tar. The latter is the genuine carbolic acid. Its medicinal effects are the same as those of wood-tar creosote, while it is not so unpleasant. It dissolves freely in alcohol and ether, and sparingly in water. Its action may therefore be modified by dilution.

The action of creosote on dentine has been already explained; and, from its *modus operandi*, it is evident that the popular opinion that it promotes the decay of the teeth is an error. Its other uses do not fall within the range of this paper.

NITRATE OF SILVER.—This salt is a powerful caustic, whether applied to the soft parts or to the bony tissues. Its action is somewhat complex. Dr. Turner imputes its escharotic power to the action of the nitric acid which is liberated by the decomposition of the salt in contact with organic matter. This, however, explains but a part of the process; for the salt seems to have a strong affinity for albumen, and unites with it without undergoing decomposition, in the proportion according to Lassaigne, of 84.5 of albumen to 15.5 of the salt. This compound is soluble in a solution of nitrate of silver, or of the chloride of sodium.

When the nitrate is applied to the skin, the immediate result is a whitish mark, caused by the union of the salt with the albumen of the cuticle. This soon becomes black, by the decomposition of the salt and the reduction of the oxide of silver. It is evident, then, that for each atom of silver set free, an equivalent of nitric acid is liberated. With these facts before us, we will be able to understand its action on dentine.

Let us, then, bear in mind that we have an agent here which acts promptly on the gelatinous portion of the tooth, destroying its vitality

to the extent of the combination which takes place ; and that by the decomposition of a part of the salt, and the consequent liberation of a part of its acid, it acts also with energy on the calcareous portion.

The compound formed by the nitrate with the organic constituents of the tooth is insoluble, except in a few substances, and therefore protects the subjacent parts, as mentioned in speaking of tannin. The precipitation of the reduced oxyd on the surface affords some additional protection.

The insolubility of the compound above mentioned, prevents the absorption of the nitrate by the dentine, and renders its action necessarily superficial. It is not true, then, that its application endangers the pulp, unless the intervening portion of dentine be so thin that it is all required in the chemical union which takes place between it and the remedy ; but it is true that its judicious application adds to the safety of the pulp, by relieving the inflammation of the dentine, which might, otherwise, be extended to it.

When the nitrate is neutralized, by an equivalent of the constituents of the dentine uniting with it, no farther chemical action can ensue ; but it should be borne in mind that the compound formed by its union with the organic portion of the tooth is soluble in a solution of the nitrate. By applying it in too great a quantity, or too frequently, there may be a greater loss of substance than is desirable or at all necessary ; for, as long as free nitrate remains in solution in the cavity, the insoluble compound is not precipitated, and the surface is, therefore, exposed to its continued action. This constitutes a great practical difference between its action and that of tannin ; for we have seen that, however much of the latter may be present, but a small quantity of it has the opportunity of producing chemical action.

The compound of the nitrate with the organic constituents of the tooth is soluble also in chloride of sodium ; hence, when the fluids of the mouth abound in this salt, the nitrate does not afford that protection to the subjacent dentine which may be obtained by some other escharotics ; and in any month, the protection is inefficient, if the surface be exposed to contact with food seasoned with the chloride.

In view of the above facts, we prefer to use the nitrate in the solid state ; and when this is not practicable, we use a concentrated solution in small quantity, in preference to repeated applications of a dilute one.

In consideration of the caustic energy of the nitrate, as compared with that of arsenic—knowing that the latter is often absorbed and destroys the vitality of the tooth, many fear that the pulp is alike endangered from its use. From the remarks already made, we think it is plain that their fears are groundless. We will add, however, that all

authorities we have been able to consult, agree that it is not absorbed, even when applied to the soft parts, but that its action is *necessarily* confined to the surface. And farther : in acute cases of poisoning, by its internal use, there is seldom—perhaps never—any evidence of its absorption.

The subjacent portion of the dentine is generally less healthy after the application of the nitrate than after the use of a proper chloride ; but, if properly used, the destruction of dentine will be less with the former than with the latter.

With a clear understanding of the *modus operandi* of the nitrate, the practitioner will be at no loss in regard to the cases demanding its use. It acts to a greater depth than tannin, or creosote, but not so deep as chloride of zinc, nor does it produce as much pain. Of its action on the soft tissues, we have nothing to say in this paper.

CHLORIDE OF ZINC.—The chloride of zinc is, perhaps, more frequently applied to dentine than any other caustic. From its *modus operandi*, it exerts an antiseptic and disinfectant, as well as escharotic influence. Its principal action is on the animal portion of the dentine ; yet, as already seen, a part of it is decomposed, and the liberated chlorine may act on the calcareous salts. As its caustic power depends, in part, on its affinity for water, it is milder in solution than in substance ; and its action is, consequently, more superficial and less painful. It is soluble in water, alcohol, ether, and chloroform. The ethereal and chloroformal solutions produce far less pain than the chloride in substance. This might be readily expected—its affinity for water being thus overcome, it exerts but a part of its caustic power. Its union with the gelatinous portion of the tooth is also more prompt when thus dissolved ; and this may, in part, explain the diminution of pain arising from its application ; as the ethereal solution of perchloride of gold, which is yet more prompt, causes still less pain. On the same principle, the actual cautery, when very hot, causes less pain and irritation than when of a lower temperature. The ether or chloroform may, however, act, directly, in lessening the pain, by local anæsthesia.

In using the chloride, or any other active caustic, it is important to remember the exalted vitality that follows its use. Practitioners are sometimes disappointed in its action, by either delaying the operation too long or beginning too soon after its application. The former, we apprehend, is the most frequent error. They wait till the exalted vitality commences, but not till it subsides. Now, we regard this as an important point ; and it is difficult to lay down definite rules respecting it. It is evident that in the teeth of young persons, and especially in those where the animal matter greatly predominates, the vitality will be

more promptly aroused than in those of the opposite texture, and, at the same time, the vital change will be greater. Now, if the exalted sensibility be confined to a thin, superficial layer, it may be almost instantly subdued by the application of the ethereal or chloroformal solution, and the cavity may be excavated before the vitality of the subjacent portion is excited. But if the operation be delayed till the reaction is established, the tooth is often found in a worse condition for excavating than before the application, and a further postponement becomes necessary.

The remarks made on absorption, when speaking of the nitrate of silver, apply with equal force here. There is not the least possible danger from this source—there can be none, even when the chloride is applied to the soft parts.

TERCHLORIDE OF GOLD.—Of this substance, we have used only the ethereal solution. It acts with great promptness on dentine, forming an insoluble compound with the gelatinous portions ; and by its decomposition, and the consequent liberation of chlorine, it acts also on the calcareous salts. On account of its promptness, neither the pain nor the disturbance of the subjacent parts is great. It is, consequently, very convenient when the exalted sensibility is superficial. The greatest inconvenience connected with its use is its great liability to decomposition. By exposure to air or light, the gold is precipitated in the metallic form. With due care, however, it can be preserved a long time, and it is easily prepared. There is, probably, no danger in its use from absorption ; but a more extended series of experiments and observations are required to warrant a positive statement on this point.

ARSENIOUS ACID.—The *modus operandi* of arsenious acid is involved in great obscurity. In regard to its topical action, Professor Bache says : “ Arsenious acid, when it produces the death of a part, does not act, strictly speaking, as an escharotic. It destroys the vitality of the organized structure, and its decomposition is the consequence. The true escharotic acts chemically, producing the decomposition of the part to which it is applied : a state incompatible with life.” Pereira says : “ Though employed as a caustic, yet the nature of its chemical influence on the animal tissues is unknown. Hence, it is termed by some a dynamical caustic.” Its escharotic power certainly bears no proportion to its destruction of vitality. That it forms definite compounds with some of the constituents of living tissues, is highly probable ; yet, if so, they appear to be readily and rapidly decomposed, by which means the acid is again free to effect similar results with the subjacent parts of the tissue.

Nearly all authorities agree that the topical application of arsenic is liable to be followed by constitutional effects. All dentists admit that the tooth pulp may be destroyed by it, through a wall of dentine of considerable thickness. In general, they maintain, that to accomplish this, the agent must, in some way, penetrate the substance of the dentine. Now, as the dentine is endowed with but feeble vitality, it is evident that its life is destroyed by the agent, to the extent that it penetrates it. Consequently, the vitality of a great portion of the dentine may be lost, by the use of the remedy, even when the pulp is not reached. The exalted sensibility of dentine is, then, subdued by this agent, more by its *vital* than by chemical effects.

The leading argument in favor of the use of arsenic for inflamed dentine is its reliability. Well, it is reliable—and no mistake. Whether the augmented sensibility be confined to a spot, a superficial layer, or extend to the whole body of the dentine, it is alike efficient. It subdues the sensibility in these cases, just as effectually as, when sweetened with syrup, or diluted with water, it overcomes the vitality of rats and cockroaches. The exalted vitality, incident to ordinary escharotic action, is not likely to annoy the operator who uses this remedy; for all such reaction is soon subdued by it. As the despot suppresses the earliest uprisings for liberty beneath his iron heel, so this tyrant drug will not tolerate, in the subjacent dentine, even the slightest attempt at rebellion.

The most soluble preparations of arsenic are the most energetic; and the quickness with which it acts is in proportion to the absorbing powers of the part. It is sometimes used as a topical application, without inducing constitutional effects; and, in other cases, the constitutional symptoms are alarming, from the local use of a very minute quantity. The whole weight of authority, we think, demonstrates the fact that the pulp is never safe when it is applied to a carious cavity of a tooth; and, as inflamed dentine may be otherwise relieved, that it should never be applied to a tooth, unless the extirpation of the pulp is indicated.—*Dental Register*.

ANALYSIS OF CEMENTUM.—The *cementum*, or *crusta petrosa*, contains more organic matter, in proportion to its inorganic, than dentine. Its composition, according to Lassaigne, is :

Organic matter.....	42.18
Phosphate of lime.....	53.84
Carbonate of lime.....	3.98

100.00

ART. VI.—HEMORRHAGIC DIATHESIS.

A case is reported in *Braithwaite's Retros.*, and published in the *Edinburgh Medical Journal*, of a patient who had an attack of hemorrhage, as follows :

"On the 25th of July last, while residing in the country, after a greater amount of exertion than usual, he commenced, at 11, P. M., to spit blood ; and, upon examination, it was found to proceed from around the neck of the first lower molar on the right side.

"The tooth was very loose, owing to absorption of the alveolar process, and the free edge of the gum embracing the tooth showed an ash-colored line of ulceration, from which the blood was seen to issue. The gums were in a very relaxed condition, but did not present the smallest scorbutic appearance."

The treatment in this case was by the usual application of styptics, escharotics and compression. Suffice it to say, that, from the 25th to the 30th, all these remedies failed, and the patient lost between five and six pounds of blood ; but the treatment was adhered to until the 3d of August. The report goes on to say :

"On considering all the circumstances of the case, it was now proposed by Mr. Nasmyth, that, if the bleeding returned, the tooth should be removed. This was in the face of the known tendency of the patient, and especially contrary to the warning he had on a former occasion received against *extraction* in particular. But it was now obvious that neither pressure, styptics, local applications, nor internal remedies, were of the slightest avail. The tooth out of the way, pressure could then be more directly applied to the bleeding points, and with some probability of success. The contraction of the gum, likewise, would of itself do some good. At all events, matters could scarcely well be worse than they were at present. An opportunity soon presented itself for putting it into practice.

"On the morning of the 3d of August, the hemorrhage re-appeared as before ; the tooth was extracted with the forceps, with little difficulty, and the gum lightly compressed. Only the usual amount of bleeding followed, and our astonishment was only equalled by our satisfaction, to find that in a short time it ceased entirely. A recurrence took place after a few hours, but under the use of pressure with the finger, and diluted tincture of matieo, the amount was not very considerable.

"This was the last of it.

"And now, naturally enough, my first feeling was one of unqualified regret that this plan had not been adopted at the outset ; and there may not be wanting some who may be disposed to censure me for indecision and an error in judgment, for having relinquished this course out of preference to the other. But, it may be well to consider how easy a matter it is for one who has been forced to make a leap in the dark, and suddenly finds himself on the other side sound and well, to ridicule the hesitation and fears of another who knows not the extent and danger of the gulf yawning at his feet. It would, assuredly, have been a proceeding open to the imputation of unpardonable rashness, had I—

with the recorded cases of a fatal termination following the extraction of teeth, in not a few instances, where, as in the present one, hemorrhagic constitution prevailed—at once removed this patient's tooth, before having made trial of every other measure which seemed likely to promise relief.

“The sequel of the case, I think, shows that the tooth was the exciting cause of the hemorrhage, and had it been allowed to remain in, the patient must at length have sunk from loss of blood. The appearance of the tooth, one fang of which was roughened and darker than the other, indicated an inflammatory action of the socket, and the portion of the fang which was dead acted like a foreign body, and kept up the irritation. The danger here, therefore, arose from the *presence* of the tooth, a feature which removes this case entirely from comparison with others, where danger has only commenced *subsequent* to extraction; and were we to lose sight of the antecedents of our patient, we might be led into the error of considering it not one of hemorrhagic diathesis at all, but merely an illustration of great local disturbance of the capillaries of a particular spot.

Query: Which is the better caution to the Dental Surgeon, the solemn warnings of some physician, when he intimates to a patient, that he has been rescued from death by superhuman skill, and paints to said patient's imagination the danger of allowing any one else to repeat the operation, or a thorough knowledge of Odontology?—EDITOR.

ANALYSIS OF ENAMEL.—The enamel, according to Berzelius, is composed of:

Phosphate of lime, with fluoride of calcium.....	88.50
Carbonate of lime.....	8.00
Phosphate of magnesia.....	1.50
Membrane, alkali and water.....	2.00
	<hr/>
	100.00

ANALYSIS OF SALIVA.—Berzelius found in 1000 parts of human saliva:

Water.....	992.9
Ptyalin.....	2.9
Mucus.....	1.4
Extract of flesh, with alkaline lactates.....	.9
Chloride of sodium.....	1.7
Soda.....	.2

Simon found in 1000 parts of his own saliva:

Water.....	991.22
Solid constituents.....	8.77

These solid constituents were:

Fat containing cholesterin.....	.52
Ptyalin, with extractive matter.....	4.37
Extractive matter and salts.....	2.45
Albumen, mucus and cells.....	1.40

EDITORIAL.

THE COMMITTEE appointed at the last Annual Meeting of the AMERICAN DENTAL CONVENTION, to prepare business and report questions for discussion for that of the ensuing year, to be held in Boston on the first Tuesday in August, 1857—consisting of Doctors KENDRICK of Mississippi, HOWARD of Maine, MILLER of Massachusetts, HELM of Rhode Island, POTTER of Connecticut, CLARK of New York, ROBINS of New Jersey, YOUNG of New Hampshire, BUCKINGHAM of Pennsylvania, GARRETS of Delaware, HARVEY of Maryland, HENRY of Georgia, McKELLOPS of Missouri, ALLPORT of Illinois, TAYLOR of Ohio, GIBBS of District of Columbia, and DEANE of Michigan—will please forward a list of subjects collected, together with such suggestions as they may wish to make, to

JOHN S. CLARK, Chairman,

No. 121 Canal Street, New Orleans.

The Committee, as above, are respectfully requested to communicate with the Chairman WITHIN THE ENSUING MONTH. All other Members of the Profession are also respectfully invited to communicate questions or suggestions to the Committee, as above.

DENTAL PERIODICALS.

The American Journal of Dental Science for October, containing a translation from the French of Dr. J. A. Giraldes, on "Diseases of the Maxillary Sinus," also the report of the proceedings of the Annual meeting of the American Dental Convention, and eleven selected articles, together with a Quarterly Summary, Bibliographical, and Miscellaneous Notices, is gladly received and placed (last though not least) on our list of exchanges. Pp. 156.

We wish this corps editorial would drop the last very significant little tell-tale, (pp.). We take this occasion to mention it, for if our last issue did contain the enormous bulk of 114 pages, we would (confidentially) intimate that that was a mis—take, and we do not intend to attempt any such aldermanic size again, at present, as our inductor only indicated the "filling up the chinks," and then we are a great lover of symmetry, and a large Journal would show ns off in sad contrast. We have even had our operating room reduced nearly one half in size, to answer corrected notions of proportion.

But still we are a friend of weighty reasons, and always did appreciate symmetrical proportions, and as were are not the little dog to "bay the moon," we would like our Southern boys in the city of processions, bear our small "flambeau," although nothing but a pine knot to our appreciation of the great "Pioneer Journal."

THE DENTAL REGISTER OF THE WEST.

It would be with more regret that we record the withdrawal of Prof. James Taylor from the corps editorial, did we not know that his active labors and pen would not stop with this act, or had he not placed in the sanetum two working men, as to whose efficiency and ability we need but point to the October number of the Register, ("Ecce Signum") containing seven original articles, (the first one worth three times the subscription price,) together with reports of societies, editorial salutation, notices, &c. We give them both hands in token of hearty fellowship, and our hat, too, if they choose.

THE DENTAL NEWS LETTER,

Is, we believe, as anxiously looked for as any of the Dental Journals, and certainly does contain as much matter of general interest to the profession, as any other, and is also the cheapest published.

It is none of our business, and entirely gratuitous on our part, but we would just like to know how many that have been served with this Journal for years, until it has become one of the naturally looked-for appendages to their office list, have never paid that small amount of subscription in return.

DENTAL RECORDER.

This Monthly Journal, has the advantage of presenting anything new, sooner than any other publication, and is always looked for with interest.

THE FORCEP.

The last issue of this publication, like our own, contained, principally, that huge Report, and a small "blizzard" editorial and the only consolation to us, is, that we are likely to be "stereotyped" into notoriety.

CONTINUOUS GUM BODY AND ENAMEL.

Dr. E. A. L. Roberts, No. 3 Bleecker St., N. Y. makes the best article for Continous Gum work, we have seen or used. It is nearer our idea of a perfect article, than we expected to get. It shrinks less, and unites more perfectly, and the color of the enamel, when well treated, leaves us but little to ask, but that it shall be always in our power to procure the same article. Dr. Roberts has established a manufactory at No. 3 Bleecker St., where all orders will be promptly filled.

THE MARCH OF SCIENCE.

A Dentist in the West, has discovered that in filling the fangs of teeth, gold wire filed to the shape that he guesses (he is a Yankee) the nerve cavity is, can be thrust up said fang with much more facility than a loaded broach, and 'with the advantage of wiggling it into a nearer approach to, or perhaps through the foramen at the fang point, while filling the crown. The same Dentist strongly advocates filling the fangs of deciduous teeth for children. In this we can see one decided advantage, that of saving gold, for all these fang-piercers can be picked out of the gums, or process, after the absorption of the deciduous fang, or pulled from the tooth, if it refuses to absorb, and is thrown off by exfoliation

WANTS.

WANTED.—An alcohol lamp that will “never went out” for “*twenty-one months*,” to keep a “*water bath at precisely 100°*,” in which to subject “*one hundred and sixty-three different simple substances*” to the action of Amalgam, or *versa visa*.

WANTED.—A supply of antiquated “*Thumb Nails*,” whose magic pressure will “*obtund the sensibility of dentine*.”

WANTED.—A “*Cathartic*” that will in the course of “*three months*,” by its rat-io-cinationary influence on the hydrostatic concatenations of the diaphragm, so operate on the circumflavity of the snow, as to hallucinate tender dentine into quietuditiveness.

WANTED.—Information of the whereabouts of the formerly successful teacher of Dentistry “*in this country*,” DR. PARK. If he is not a *myth*, it is probable some of his cotemporaries can inform us, but we have enquired diligently of some of the oldest Dentists in N. Y., the city where he is represented to have practiced and taught, but no such person is remembered. If we cannot find him, we shall have to apply to the U. S. Naval Board for the appointment of under boot-black to some frigate, sailing up the Mediteranean, that we may pursue our scientific and antiquarian enquiry.

WANTED.—Some agent by which we can suspend the laws of atmospheric pressure and cohesive attraction, in order to try the effect of capillary attraction in retaining bodies with two plain surfaces in contact, (as for instance) a plate adapted to the alveolar ridge and palatine arch.

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